

In the Name of Allah, the Beneficent, the Merciful



Soil Science News

Quarterly Newsletter of Soil Science Society of Pakistan

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EDITORIAL

Commendation for Holding 15th Congress of Soil Science

We, on the behalf of the soil science community of Pakistan, commend the Executive Council of SSSP as well

NEWS AND VIEWS

15th International Congress of Soil Science

The Soil Science Society of Pakistan organized its 15th International Congress of Soil Science, March 18-20, 2014, at National Agricultural Research Centre, Islamabad. Theme of the Congress "Soil Management in



From left: Dr. Nadeem Amjad, Dr. Muhammad Arshad, Dr. Manzoor Sawati, Dr. Muhammad Azeem, and Dr. Zahir Shah at Inaugural Session of the Congress

as Organizing, Technical and other committees for organizing the 15th Congress of Soil Science at National Agricultural Research Centre, Islamabad, 18-20 March, 2014 in a befitting manner. We believe that this mega professional event was not possible without the generous support of Chairman, Pakistan Agricultural Research

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Changing Climate" was well tuned with the prevailing agricultural situation in the country.

The Congress was attended by a galaxy of national and international agricultural scientists. Registered participants of the Congress were more than 400.

Inaugural session of the Congress was chaired by Manzoor Sawati, Vice Chancellor, Agriculture University, Peshawar. Dr. Nadeem Amjad, Member (NR), PARC and Dr. M. Azeem Khan were Guest of Honour. Dr. Zahir Shah, President, SSSP welcomed the Guests and the participants.

Proceedings of the session started with recitation from Holy Qurâan. Dr. M. Tariq Siddique, Secretary, SSSP/Congress Secretary briefed the participants about history and activities of the Society.



From left: Dr. Zahir Shah, President SSSP presenting SSSP souvenirs to Dr. Manzoor Sawati, Dr. Nadeem Amjad, Dr. M. Arshad and Dr. M. Azeem at Inaugural Session of the Congress



From left: Dr. Zahir Shah, Dr. Muhammad Arshad, Dr. Muhammad Azeem, Dr. Nadeem Amjad, and Dr. Manzoor Sawati at Inaugural Session of the Congress

Dr. Zahir Shah, President SSSP Pakistan Agricultural Research Council welcomed the Guests and the participants in his welcome address.

Professor Dr. Muhammad Arshad, Dean, Faculty of Agriculture, University of Agriculture, Faisalabad presented the Key Note address. Subsequent to the inaugural session, there was a **Plenary Session**, in which leading scientists of the country highlighted the challenges to the agriculture in changing climate.

A total of 205 research papers were presented in 10 technical sessions and 6 poster sessions. In the oral and poster presentations, crucially important issues pertaining to various disciplines of soil science, i.e., Soil Fertility & Plant Nutrition, Soil Salinity, Soil Physics, Soil Environment, Soil Chemistry, Soil Biology & Biochemistry, and Soil & Water Conservation, were highlighted, elaborated, and discussed.

Concluding Session of the congress was chaired by Dr. Riaz Hussain Qureshi, Vice Chancellor (Rtd.) University of Agriculture, Faisalabad. Dr. Tariq Siddique, Secretary, SSSP, brief the Chief Guest and audiences about the

Agricultural Research Centre, Islamabad. In the end, President, SSSP thanked the Chief Guest, participants, organizers and sponsors of the Congress.

Recommendations of 15th Congress of Soil Science.

The 15th congress of soil science was held at National Agricultural Research Council (NARC) from March 18th -20th 2014. The theme of congress was “**Soil management in changing climate**”. The congress was attended by about 400 delegates from all over the country. The congress program included one key note address, four plenary session papers, about 150 oral and 50 poster presentations.

A committee was constituted by the Executive Council for formulation of recommendations and was convened by Dr. Nisar Ahmad, Former Chief, National Fertilizer Development Centre, Islamabad. The committee considered the three days deliberations and brainstorming and came out with the following set of recommendations:



From left: Dr. M. Tariq Siddique, Dr. Zahir Shah, Dr. Nisar Ahmed and Dr. Riaz H. Qureshi at Concluding Session of the Congress

three-day Congress proceedings. Thereafter, Chief Guest presented cash awards and appreciation certificates to the authors of the outstanding poster papers. The Chief Guest also presented appreciation certificates to those who make this mega event successful. After that Dr. Nisar Ahmad, Chief (Rtd.), NFDC, Islamabad/Chairman Congress Recommendation Committee, presented the Congress recommendations. The Chief Guest, Dr Qureshi, appreciated efforts of the Society for elevating the soil science profession and holding the Congress at National

1. There was general consensus that climate change is an established phenomenon the world over. This has impacted Pakistan as well such as increased variability of Monsoon, increased risks of floods and droughts, severe water-stressed conditions in arid and semi-arid region, food insecurity due to reduced agriculture productivity, more rapid recession of Hindu Kush-Himalayan Glaciers, reduction in capacity of natural reservoirs due to rise in snowline, and upstream intrusion of saline water in the Indus delta and risk to

mangroves, coral reefs and breeding grounds of fish etc.

2. Livestock production systems are also vulnerable to temperature stress, fodder availability and their productivity may also be impacted.
3. Simulation models by Global Change Impact Studies Center (GCISC) in Pakistan predicted that wheat yield is likely to be reduced by 3-16% and basmati rice by 5-18% by the end of this century.
4. Thus Soil Scientists are to become part of solution to this challenge through innovative technologies in soil management to mitigate climate change effects.

Actions to mitigate climate change effects:

5. Further refine and apply best agriculture practices and precision farming with site specific production technologies.
6. Minimize intensity and frequency of soil disturbance to protect carbon sink and conserve soils.
7. Saline and water logged soils should be reclaimed and causes of salinity/water logging be addressed through appropriate technologies such as brackish water management and breeding for salt tolerant crops.
8. Organic matter in the soil should be conserved through



Congress participants enjoying the cultural show at the event of the Congress

recycling of crop residues and proper legislation be enacted against its burning in the field or its transportation outside a field for fuel purposes. The green manuring, crop rotations, humic acid and compost etc. should be added in the soil.

9. Carbon sequestration in soil through management of organic matter, the loss of nitrogen in the atmosphere or its leaching should be minimized. The bio diversity in soil should be maintained.
10. Water use efficiency should be improved through

technologies such as drip irrigation, timely application, lining of water courses, rain water harvesting.

11. The polluted sewerage water should only be used after proper treatment. Also it is need of the time to monitor



A Session of the Congress is in progress

the excessive mining of ground water.

12. Fertilizer use efficiency for optimum yield and economics should be improved significantly through agronomic practices, balanced use of nutrients and right use of fertilizers at right time. The integrated use of nutrients such as chemical fertilizers, organic sources and bio fertilizers should be encouraged.
13. Bio-fertilizers can save substantial cost by rationalizing the chemical fertilizers. This is relatively



economical, efficient, productive and accessible technology marginal and small farmers. Future research should be focused on using microbial consortium for developing biofertilizers for stress tolerance. Awareness should be created among the farmers.

14. There should be integrated approach of soil and climate management involving all the stake holders i.e policy makers, researchers, extension workers and the farmers. All public and private institutions have to join



Dr. Riaz H. Qureshi (Chief Guest at Concluding Session) distributing the Cash Award and Certificates among first, second and third best poster winner.

hands, create awareness among masses. Strong political will and commitment is prerequisite.

15. The existing environmental laws should be implemented and improvement should be brought in the emerging areas. Climate change should be integrated in national development plans and national climate change policy should be implemented in letter and spirit.
16. Check deforestation; limit urban sprawl as it is eating highly productive land as well as causing serious environmental issues.
17. Quality control of agriculture inputs that's of seeds, fertilizers and pesticides should be monitored at different stages from production, marketing and use at farm level. Its misuse accelerates the environmental degradation, poor quality of produce and financial loss to farming community as well as at national level.
18. Industrial emissions should be controlled by proper environmental devices and all industries should effectively follow corporate social responsibility.

Finally the 15th international congress of soil science came

up with the strong opinion that mitigation/adaptation to possible future climate change will depend on a better definition of what changes will occur where, and on prudent investments, made in timely fashion, in mitigation/adaptation strategies.

Commendation for Holding 15th Congress

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Council, and Director General, National Agricultural Research Centre, Islamabad – in terms of hosting the Congress and extending the requisite logistic facilities. Nevertheless, cooperation and all out support extended by the Land Resources Research Institute, and PMAS University of Arid Agriculture proved also crucial and helpful in making the event a success.

We also acknowledge the generous contributions of sponsors from public sector (i.e., HEC) as well as from private sector, (i.e., Fatima Fertilizer, Engro Fertilizer, Tara Group, Auriga Group, Fuji Fertilizer, Jaffar Brothers, DH Fertilizers, Greenica and Greenish.



Congress participants with Chief Guest Dr. Riaz H. Qureshi

NEWS AND VIEWS

New World Soil Museum

International Soil Reference and Information Centre (ISRIC), has opened the new World Soil Museum in



Wageningen, The Netherlands. ISRIC, founded by a proposal of the ISSS (now IUSS) has hosted an international soil museum since 1966. In the new World Soil Museum, visitors can learn about the role of soils in life and ecosystems and get an impression of the variation in soils of the world, from the colourful volcanic ash soil from Indonesia to the Terra Preta soil from the Amazon. The museum displays soil monoliths with accompanying data

including a full profile description, soil chemical and physical data, and information on the landscape and land-use.

International Year of Soils 2015 - IYS 2015

After two years of intensive work since FAO member Countries endorsed the request from the Kingdom of Thailand in the framework of the GSP for the proclamation of the International Year of Soils 2015 at the 146 FAO Council held in 24 April 2013, 5 December as “World Soil Day” and 2015 as “the International Year of Soils” (IYS) has been declared the International Year of Soils by the 68th UN General Assembly (A/RES/68/232).

2015
International
Year of Soils



The IYS aims to be a platform for raising awareness of the importance of soils for food security and essential ecosystem functions.

The IYS aimed to: (i) raise awareness of civil society actors and decision makers of the fundamental role of soils for human existence, their role for food security, climate change adaptation and mitigation, and as a support for productive ecosystems; (ii) act as catalyst and enabling environment for global soil initiatives in response to the outcome of Rio+20 and MDGs; (iii) promote, at all levels, policies and actions for the sustainable management and protection of soil resources; (iv) appeal for support and investment in soil activities across the regions aiming at healthy soils to increase food production and global food security; (v) advocate for the enhancement of soil information at all levels to support more effective policies, strategies and actions for sustainable soil management.

PROMOTION/APPOINTMENT AND POSTING

Prof. Dr. Shafqat Nawaz, Principal, University Agricultural College, Borewala, University of Agriculture, Faisalabad had been appointed as Dean, Faculty of Agriculture, The Ghazi University, Dera Ghazi Khan. Prof. Dr. Shafqat Nawaz did M. Sc. (Hons.) Agri. (Soil Science), in 1984 and Ph. D. in 1993. He started his professional career as a Research Officer and later as Lecturer, Dept. of Soil Science, UAF. He joined College of Agriculture, D. G. Khan Sub Campus, UAF as Associate Professor in 1999 and elevated as Professor in 2006.



Dr. Muhammad Aslam, Principal Scientist, Soil Science Division, Nuclear Institute of Agriculture (NIA), Tando Jam, Sindh has been transferred to Soil Science Division, Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad.



Mr. Muhammad Yousaf, Agricultural Officer, Soil and Water Testing Laboratory, Multan has assumed the charge of Director, Soil Salinity Research Institute, Pindi Bhattian.



Dr. Shahid Javed, Agricultural Chemist and **Mr. Tahir Majeed**, Assistant Research Officer, Soil Chemistry Section, Soil and Environmental Institute and **Mr. Muhammad Afazl**, Assistant Agricultural Chemist, Biotechnology Research Institute, Ayub Agri. Research Institute, Faisalabad have been transferred to Fertilizer Reference Laboratory, Soil Fertility Institute, Lahore.



Dr. Ishfaq Anjum, Agri. Chemist (Bio-tech.), Biotechnology Research Institute, Ayub Agri. Research Institute, Faisalabad has been transferred to Soil Salinity Research Institute, Pindi Bhattian, Hafizabad.



Mr. Mashooq Hussain Odhano, Agriculture Officer, Agricultural Research Institute, Tandojam and **Mr. Nasir Khan Katiar**, Senior Scientist, working in a World Bank Project “High Efficiency Irrigation System”, Bahawalpur, have been selected as Assistant Agriculture Chemist/Assistant Soil Fertility Research Officer by Sindh Public Service Commission.



Mr. Naveed Ali S/O Slo Abdul Sattar Khokhar, **Mr. Zahoor Ahmed** S/O Ghulam Akbar Channo, **Mr. Khalil**

Ahmed S/O Azizullah Manai, Mr. Muhammad Asif S/O Muhammad Ashraf Slddlaui, Mr. Imran Ali S/O Muhammad Usman Dhamach have been recommended by the Sindh Public Service Commission for posts of Assistant Research Officer in Agricultural Research.

Mr. Vishandas Suthor, Research Fellow, Land Resources Research Institute, NARC, Islamabad has been selected as Scientific Officer in Central Cotton Committee, Islamabad.

Mr. Muhammad Ilyas, Agri. Chemist, Soil Salinity Research Institute, Pindi Bhattain, Hafizabad has been given additional charge of Agricultural Chemist, Pesticide Quality Control Laboratory, Soil Chemistry and Environmental Sciences Institute, AARI, Faisalabad.



Mr. Imdad Ali Mahmood and Mr. Tauseef Tabssam, Scientific Officers, Land Resources Research Institute, NARC, Islamabad have been promoted as Senior Scientific Officers and are working in the same institute.



Dr. Sagheer Ahmad, Senior Scientific Officer, Sugar Crops Program, Crop Sciences Institute (CSI), NARC, Islamabad has been promoted as Principal Scientific Officer and appointed as Program Leader, Sugar Crops Program, CSI, NARC, Islamabad.

RECENTLY COMPLETED PhD(s)

Dr. Saleem Maseeh Bhatti, Lecturer, Department of Soil Science, Sindh Agriculture University, Tandojam, completed his PhD degree from Massey University, New Zealand and has joined the University as Assistant Professor. His dissertation titled "Arsenic irrigated vegetables: Risk assessment for South Asian horticulture" was funded by Higher Education Commission of Pakistan under Overseas Scholarship for MS/MPhil leading to PhD. Dr. Bhatti's findings can be used to strengthen regulations that protect human health in locations where arsenic contaminated water is used to



irrigate vegetable crops.

Mr. Muhammad Sarfraz, Assistant Research Officer, Soil Salinity Research Institute, Pindi Bhattian Completed his Ph.D. on July 10th, 2014. He Worked under the Supervision of Dr. Muhammad Abid, Professor and Chairman Department of Soil Science, Faculty of Agricultural Sciences and Technology, BZU, Multan and Dr. Shahzada Munawar Mehdi, Director Soil Fertility Research Institute, Lahore. His thesis title was "Phosphorus Management in rice-wheat cropping system in two alluvial Soil Series of Pakistan".



Congratulation for earning higher qualification!

HONOR AND AWARDS

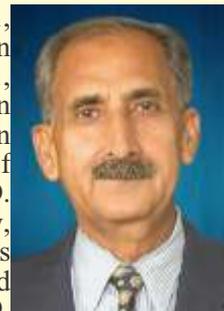
Dr. Azeem Khalid, Associate Prof. Deptt. Environ. Sciences, PMAS Arid Agriculture University Rawalpindi has bestowed the HEC Outstanding Research Awards in the category of Best Research Paper Awards in the area Biological Sciences on a paper, "Accelerated decolorization of reactive azo dyes under saline conditions by bacteria isolated from Arabian seawater sediment", published in Applied Microbiology And Biotechnology.



Soil Science News congratulates Dr. Khalid on behalf of SSSP!

RECENTLY COMPLETED PhD(s)

Dr. Muhammad Aslam, Director, Agricultural Polytechnical Institute, National Agricultural Research Centre (NARC), Islamabad has retired by superannuation on 16-06-2014. After his superannuation at the NARC, Islamabad, he joined ICARDA, Pakistan. He joined Pakistan Agricultural Research Council, Islamabad as Scientific Officer in 1981. Dr. Aslam did M. Sc. in biochemistry from University of Agriculture, Faisalabad in and Ph.D. from Missouri State University, Missouri, USA. He was promoted as Senior Scientific Officer in 1993 and Principal Scientific Officer in 2009. He has executed several development research projects and his research work was mainly focused on Biological Nitrogen Fixation and production of Bio-fertilizer for legumes and cereals.



We pray for their good health and a prosperous retired

News and Views for next issue of the Soil Science News, may be conveyed to Society office bearer of you chapter or to **Dr. M. Mahmood-ul-Hassan**, Editor, Soil Science News, Land Resources Research Institute, National Agricultural Research Centre, Islamabad 45500, Pakistan. Tel: +92 518443128; E-mail: mmh@comsats.net.pk