



In the Name of Allah, the Beneficent, the Merciful

Soil Science News

Quarterly Newsletter of Soil Science Society of Pakistan

Editor: Dr. Muhammad Iqbal

Associate Editor: Prof. Dr. Mehrunisa Memon

April - June 2017

Vol. 18 (2)

Editorial

Redefining Agro-Ecological Zones in Pakistan: Need of the time for Improving Crop Productivity

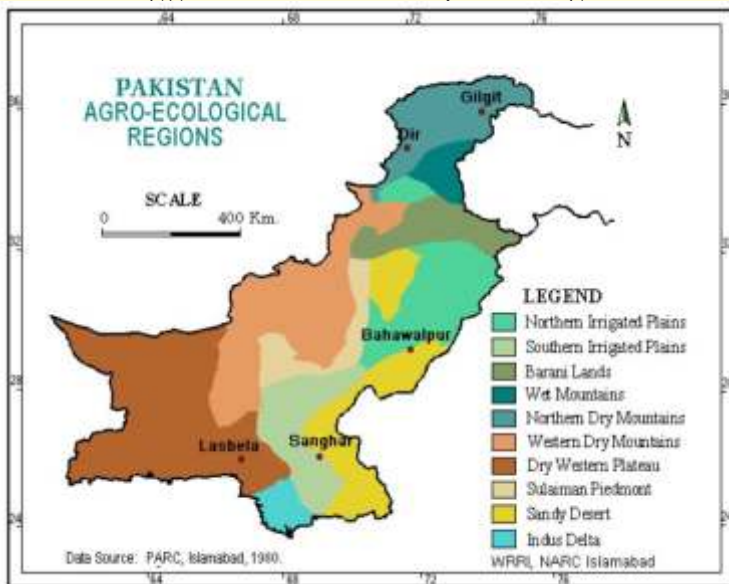
Agriculture in Pakistan is threatened by various challenges like expanding population, increased urbanization, constrained water assets, low productivity, poor base of innovation, global warming and climate change.

Pakistan has diverse agro-ecological conditions due to the variation in crops, climate, edaphic conditions, hydrological systems and terrain conditions. But there is no recent national level effort in which all the important parameters of agriculture, land cover, climate, soil and terrain are incorporated to produce agro-ecological zones.

Information related to agro-ecological zones is necessary for the optimal land use planning and management of natural resources to ensure enhanced food security in a sustainable manner. The zoning at micro level is vital for increasing per acre productivity of the crops through site specific recommendations and by growing the crops which are suitable and comparatively productive in the local conditions.

There was an effort in early 1980 in which roughly 10 agro-ecological zones were identified. These included (i) Indus Delta, (ii) Southern Irrigated Plain, (iii) Sandy Desert, (iv) Northern irrigated Plain, (v) Barani (rainfall), (vi) Wet Mountains, (vii) Northern dry mountains, (viii) Western Dry Mountains, (ix) Dry Western Plateau and (x) Sulaiman Piedmont.

Keeping in view the changing climatic conditions, shifting trends of urbanization, advances in agro-industry and biotechnology, there is a dire need to update our agro-



Continue at Page 3

Productive Scientists of Pakistan

Pakistan Council for Science and Technology has recently released Directory of Productive Scientists of Pakistan, 2016. This productivity is assessed based on research related parameters including authorship of books, PhD research supervision, cumulative impact factor and citations for the papers published in impact factor journals, patents granted, awards won and winning of competitive grants.

The top ten soil scientists in the Agricultural Sciences category include:

- Prof. Dr. Zahir Ahmed Zahir (Director ORIC, Univ. of Agri. Faisalabad/Editor-in-Chief Soil and Environment)
- Prof. Dr. Ghulam Murtaza (Director Academics, Univ. of Agri. Faisalabad)
- Prof. Dr. Javed Akhtar (Director ISES, Univ. of Agri. Faisalabad)
- Prof. Dr. Ghulam Jilani (Director Academics, PMAS-Arid Agri. Univ. Rawalpindi)
- Dr. Abdul Rashid (Fellow/Editor-in-Chief Pakistan Academy of Sciences)
- Dr. Muhammad Naveed (Asstt. Prof. ISES, Univ. of Agri. Faisalabad)
- Dr. Muhammad Saqib (Assoc. Prof. ISES, Univ. of Agri. Faisalabad)
- Dr. Tariq Aziz (Assoc. Prof. ISES, Univ. of Agri. Faisalabad)
- Prof. Dr. Zahir Shah (Director UAFS, Univ. of Agri. Peshawar)
- Dr. Muhammad Khalid (Prof. ISES, Univ. of Agri. Faisalabad)

Congratulations to all from Soil Science News!

Professional Events

International Conference on "Advances in Agriculture Resource Management"

Institute of Soil & Environmental Sciences and Department of Agronomy, University of Agriculture Faisalabad co-organized an international conference on April 2-5, 2017 at the university. The overall scope of this conference was to bring and introduce all the new development in Pakistan and around the world which will help to improve sustainable agriculture in Pakistan, the conference provided a platform to international experts, policy makers, implementers, researchers and farmer representatives to share their new ideas and innovations for the sustainable solutions of the issues being faced by Pakistan agriculture.

Argentine Ambassador to Pakistan Mr. Ivan Ivanisovich was the Chief Guest of the inaugural session of the conference. He

emphasized that Pakistan counts among the countries that will suffer most from climate change and called for creating good



interface mechanism between farmers and agricultural experimental stations, centers and universities.

UAF Vice Chancellor Prof. Dr. Iqar Ahmad Khan said that half of the country population will be living in urban areas by next 15 years in Pakistan that will increase the burden on the urban areas and pose a threat to the food security. UAF former vice chancellor Dr Riaz Hussain Qureshi called for mapping out to a policy to have a ban on the conversion of fertile agricultural land into the other usage. Director Institute of Soil and Environmental Sciences Dr. Javed Akhter said that we have to increase the productivity for the ever increasing population as the agriculture land was diminishing. During the technical session several ground breaking research outcomes were presented related to a variety of themes including Climate change and energy, Biofortification, Genetic and Molecular Techniques, Marginal Lands Utilization, Precision Agriculture, Rangeland Management, Value Addition in Agriculture, Resilience and Biosecurity, Crop Production, Cropping and Farming Systems and Natural Resources Management.

International Seminar on "Potassium Nutrition for Sustainable Crop Production"

One-day International Seminar on "Potassium Nutrition for Sustainable Crop Production" was organized by the Department of Soil Science, Sindh Agriculture University (SAU), Tandojam, Engro Fertilizers Ltd., International Plant Nutrition Research Institute (IPNI) at A.M. Sheikh Auditorium, SAU, Tandojam on April 19, 2017. The event was attended by more than 200 participants from various organizations of Sindh. The guest



speakers included Dr. Mujeeb-ud-Din Sahrai Memon, Vice Chancellor, SAU, Tandojam, Dr. Munir Rusan from IPNI, Mr. Muhammad Asif, Syed Mohsin from Engro and Dr. Inayatullah Rajpar Chairman Department of Soil Science, SAU, Tandojam who talked on the importance of potassium use for sustainable crop production. Dr. Zia-ul-Hassan Shah (SAU-Tandojam), Dr. Nizamuddin Depar (NIA-Tandojam), Syed Mahmood Nawaz Shah (Progressive Grower) and Mr. Sabit Ali Baloch (Engro Fertilizers) delivered technical talks on various aspects of potassium nutrition management for sustainable crop production

during technical sessions. Mr. Muhammad Yousuf Memon DCS, NIA, Tandojam and Mr. Kaleemullah Sheikh, Assistant Agriculture Chemist, ARI, Tandojam chaired the technical sessions. Shields/souvenirs were presented to all guest speakers, chair technical session and to Prof. Dr. Kazi Suleman Memon for his outstanding contribution to R&D in the field of Soil Science in Sindh from the Chairman, Department of Soil Science, SAU, Tandojam. Awards sponsored by IPNI and Engro Fertilizers Ltd were presented to three best poster presenters and three position holders of B.Sc (Agri) Hons, Department of Soil Science, SAU, Tandojam. Prof. Dr. Inayatullah Rajpar and Dr. Ghulam Murtaza Jamro acted as Chairman Organizing Committee and overall coordinator of the event.

International Seminar on "Potassium in Agriculture"

A one day international seminar was organized by by Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad. Experts at the seminar called for ensuring balance usage of fertilizer to overcome decreasing soil fertility, and to increase productivity. Chairing the session, UAF Vice Chancellor Prof Dr Iqar Ahmad Khan said that imbalance usage of fertilizer was not only decreasing soil fertility but also causing



a damage of billions of rupees to the national economy. He said that the balanced fertilizer use could result in increasing productivity of major crops up to many percent. Institute Director Dr. Javed Akhtar emphasized the need for raising the awareness among the farming community about the balance usage of fertilizer to achieve food security. International Plant Nutrient Institute Consulting Director Middle East Munir Al Rusan called for enhanced efforts and tangible research work to overcome the issue of imbalance usage of fertilizer. Mr. Asif Ali from Engro Fertilizer said that climate changes were posing a serious threat to the people and food security. He said that the balances usage of fertilize would help addressing the issue.

4 Days Training Workshop on "Solid Waste Management"

A 4- days training workshop on "Solid Waste Management" was jointly organized by Central Cotton Research Institute (CCRI) and Town committee Sakrand in collaboration with, Dr. Akhter Hameed Khan Memorial Trust Rawalpindi and Watan Welfare Organization Sakrand. The workshop was organized on May 12-15, 2017 at Central Cotton Research Institute, Sakrand, Sindh. Representatives from academia, NGO's, social workers, extension agents and elected representatives participated in the workshop. Mr. Vishandas Suthar and Mr. Abdullah Keerio, Scientific Officers, CCRI/ SSSP members delivered lectures on solid waste management, impact of untreated waste water used in agriculture and composting technology.

PROMOTIONS, APPOINTMENTS, AND POSTINGS

Mr. Ghulam Hussain Talpur, has been appointed as Research officer (BPS-17), National Fertilizer Development centre, Ministry of Planning, Development and Reform, Pakistan.



Dr. Muhammad Afzal Chajjro, has joined as Assistant Professor at Department of Soil Science, Sindh Agriculture University, Tandojam under the Interim Place of Fresh PhDs Program (IPFP) funded by Higher Education Commission, Pakistan.

Mr. Muhammad Zeeshan, has joined Directorate of Soil Survey of Punjab, Lahore as Assistant Soil Survey Research Officer after completion of his M.Sc. (Hons.) Agriculture-Soil Science degree from PMAS-AAUR.



Ms. Anum Rafique, has been appointed as Assistant Soil Survey Research Officer/Junior Land Resource Survey Specialist at Directorate of Soil Survey of Punjab, Lahore. She completed her M.Sc. (Hons.) Agriculture-Soil Science degree from PMAS-AAUR.

Dr. Muhammad Imran, has joined Department of Soil Science, Ghazi University, Dera Ghazi Khan as Assistant Professor through Higher Education Commission of Pakistan's Interim Placement Program. Dr. Imran completed his PhD from PMAS-AAUR.



Dr. Muhammad Azeem, has joined Department of Agriculture, Hazara University Manshera as Assistant Professor of Soil Science through Higher Education Commission of Pakistan's Interim Placement Program. Dr. Azeem completed his PhD from PMAS-AAUR.

Dr. Sajid Masood, has returned back after completion of Post-Doctorate from Institute of Soil Science, Nanjing China through President's International Fellowship Initiative-Chinese Academy of Sciences, China. Dr. Sajid worked on "Plant Growth Promoting Rhizobacteria (PGPR)-induced Nutrient Valorizations in Plants: Mechanistic Insights". Earlier he served Quaid-e-Azam University Islamabad as Assistant Professor Plant Sciences. He is ambitious to advance research work on Nutrient Management and crop tolerance to abiotic stress conditions like salinity, boron toxicity and heavy metals.



RECENTLY COMPLETED PhDs, SEMINARS, FELLOWSHIPS

Ms. Ambrin Baby Rajput, Assistant Agriculture Chemist at Agriculture Research Wing, Department of Pulses Research

Sub-Station Tandojam has successfully completed PhD from Department of Soil Science, Sindh Agriculture University Tandojam as per notification of the university dated June 06, 2017. She conducted her research work on "Integrated Nutrient Management in Banana" under the supervision of Prof. Dr. Mehrunnisa Memon.



Congratulations to all from Soil Science News!

FOREIGN VISITS AND FELLOWSHIP

Prof. Dr. Allah Wadhayo Gandahi, Department of Soil Science, Sindh Agriculture University Tandojam attended a multilateral Seminar on "Climate Change and Agricultural Sustainable Development for Developing Countries" at Beijing, China. The seminar was held on 11-30 May, 2017 and was organized by Foreign Economic Cooperation Centre, Ministry of Agriculture, China.



Redefining Agro-Ecological Zones in Pakistan:

Continued from page 1

ecological zoning to finer resolution and to include comprehensive and integrated information about agro-ecology zones which is necessary for intervention in agriculture ecosystems.

Recently Agriculture Department of the Government of Punjab has taken an initiative of redesigning agro-ecological zones to fight the challenges of climate changes, water and soil fertility and to increase productivity on the bases of competitive advantage.

Faisalabad, PMAS-Arid Agriculture University Rawalpindi, MNS-University of Agriculture Multan, Directorate of On-Farm Water Management, Punjab Agriculture Research Board, Directorate General Agricultural Research, Directorate General Agri. (Extension & Adaptive Research), Directorate General Agri. (Pest Warning & Quality Controls of Pesticides), Directorate General Agri. (Water Management), Directorate General Agri. (Field), Directorate General Soil Survey of Punjab and Pakistan Meteorological Department is working on the initiative.

Similar initiative must be taken at national level and by other provinces/federating units.

HONORS AND AWARDS

Dr. Abdul Rashid brings Laurels to Pakistan

A past President of Soil Science Society of Pakistan, Dr. Abdul Rashid, has brought laurels to the country by receiving the prestigious J. Benton Jones Award at 15th International Symposium on Soil and Plant Analysis held in Nanjing, China on 14-18 May, 2017. This Award is conferred biennially by the Soil and Plant Analysis Council of USA to an individual who has made significant contributions in the development and advancement of soil testing and plant analysis. The past 14 recipients of this Award belonged to USA, Canada, Australia, Ireland, Hungary, South Africa and The Netherlands. Thus, Dr. Rashid is the first-ever Asian scientist to win this international recognition.



Dr. Rashid's innovative problem solving research and effective writings have had brought him many other international and national awards and recognitions, like the prestigious IFA Norman Borlaug Award for excellence in crop nutrition research. He has served as Director General of National Agricultural Research Center and Member (Bio-Sciences) of Pakistan Atomic Energy Commission. Currently, he is Fellow & Editor-in-Chief of Pakistan Academy of Sciences, and is involved in global effort on biofortification of wheat and rice with zinc and iodine for combating micronutrient malnutrition ('hidden hunger') in resource-poor populations of developing countries.

Dr. Zia-ul-Hassan Shah, Professor of Soil Science at SAU, Tandojam, Ex-Vice President SSSP, Best University Teacher Award and Research Productivity Research Award recipient has been selected by Higher Education Commission as expert committee member of Agricultural Sciences Journals.



Mr. Zohaib-ur-Rahman Bughio, M.Sc student Department of Soil Science received a Gold Medal on the basis of first position in B.Sc (Hons.) Agriculture in the Faculty of Crop Production, SAU, Tandojam.

Mr. Muhammad Zeeshan, Assistant Soil Survey Research Officer, Directorate of Soil Survey of Punjab, Lahore has been awarded Gold Medal on the basis of first position in M.Sc. (Hons.) Soil Science in PMAS-Arid Agriculture University Rawalpindi.



Congratulations to all from Soil Science News!

RETIREMENTS

Mr. Umer Farooq, Soil Bacteriologist, Soil Bacteriology Section, Ayub Agricultural Research Institute, Faisalabad has retired from Government services on April 02, 2017 on attaining the age of superannuation.

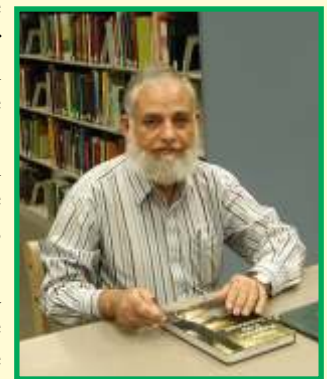
Mr. Abdul Rehman Jami, Assistant Agricultural Chemist, Soil Salinity Research Institute Pindi Bhattian has retired from Government services on April 09, 2017 on attaining the age of superannuation.

Soil Science News, wish them a happy, healthy and prosperous retired life.

OBITUARY

Prof. (Rtd) Dr. Mushtaq Ahmed Khan has passed away after a long ailment. He served PMAS-Arid Agriculture University Rawalpindi as Dean Faculty of Crop and Food Sciences and Chairman Deptt, of Soil Science & Soil Water Conservation. He was an excellent academician and researcher. He supervised several postgraduates' students and authored several research articles in peer reviewed journals.

Prof. (Rtd) Dr. Muhammad Iqbal Lone, Deptt, of Soil Science & Soil Water Conservation, PMAS-Arid Agriculture University Rawalpindi has passed away. He was a dedicated teacher/researcher and served the University more than 25 years in different capacities. He produced several postgraduates' students and published research articles in well-reputed journals. He also served the university as Director Office of Research, Innovations and Commercialization. His sad demise has been declared as a big loss to the soil science community in Pakistan.



The Society records a deep sense of grief and sorrow for the sad demise of the distinguished Scientists and prays for the departed souls.

News and Views for next issue of the Soil Science News, may be conveyed to Society office bearers of your chapter or to **Dr. Muhammad Iqbal**, Editor, / **Prof. Dr. Mehrunisa Memon**, Assoc. Editor, Soil Science News, Land Resources Research Institute, National Agricultural Research Centre, Islamabad 45500, Pakistan. Email: ssspnews@se.org.pk