



In the Name of Allah, the Merciful, the Beneficent

SOIL SCIENCE NEWS

Quarterly Newsletter of Soil Science Society of Pakistan

Editor: Dr. Shahid Javid

Associate Editor: Ajmal Khan

July-December 2009

Vol. 10 (No. 3 - 4)

FROM EDITOR'S DESK

Sustainable agriculture is one that produces abundant food without depleting the earth's resources or polluting its environment. It follows the principles of nature to develop systems for raising crops and livestock that are, like nature and self-sustaining. Sustainable agriculture ranging from the narrow focus on economics or production to the incorporation of culture and ecology. In this system, agriculture does not deplete soils or people. Sustainable agriculture takes many forms, but at its core is a rejection of the industrial approach to food production developed during the 20th century. Sustainable productivity in our agricultural ecosystem is therefore an important objective. Pakistan is a developing country with the world's sixth-largest population. The current population of Pakistan is about 160 million, which is growing rapidly. The major population of the country lives in rural areas and depends mainly on agriculture, and about 32 percent of the population lives below the poverty level. GDP growth continues to depend on crop performance. Sustainable agriculture depends on a whole-system approach whose overall goal is the maintenance of health of the land and people. Therefore, it concentrates on long term solutions to problems instead of short term treatment of symptoms. There are several important constraints to sustainable agriculture and causing low productivity.

These include soil degradation (soil salinity, alkalinity, erosion and soil fertility depletion), depletion of water resources, mismanagement of irrigation systems, the distribution of the land holdings and poor farming practices. The use of farm inputs, particularly of fertilizers, are inadequate and inefficient. Farm energy use is low. The availability of quality seed is limited. Agricultural research is lagging behind the new challenges. Agricultural extension services are not tuned to modern technology. The theme of our 13th Congress of Soil Science "Efficient Resource Management For Sustainable Agriculture" will surely address the problems related to sustainable agriculture.

WHEAT SCENARIO IN PAKISTAN

In November 2009, the Society has successfully organized a national seminar "Wheat Scenario in Pakistan" at Ayub Agricultural Research Institute Faisalabad. The president of SSSP chaired the occasion. More than 150 scientists all over the country participated in the Seminar. The eminent scientists/ program leaders from provinces and country representative of ICARDA shared their vision with fellow scientists. Dr Muhammad Rashid, Director General (Research), AARI, Punjab; Dr. Fatehullah Khan, Director General, ARI, Tamab, NWFP and Dr Zial-ul- Hussain Deputy Director on the behalf of Director General, ARI, Tandojam, Sindh discussed the status and development of wheat program in their provinces. Dr Abdul Majeed, country representative of ICARDA presented the overview of wheat production in Pakistan. Mr Makhdoom Hussain, Director Wheat, AARI, Faisalabad, briefed the scientists about research focus and wheat breeding program at AARI, Faisalabad. Dr Shahid Mehmood, Director, Rapid Soil Fertility, Lahore, discussed the nutrition status of our soils in relation to wheat production. Rana Farman Ali Khan, District Executive Officer, Faisalabad also shared the experiences with audiences. Constrains and obstacles for achieving maximum yield potential of our wheat varieties at farmers level were discussed at length and their solutions were presented.



Dr Muhammad Arshad President Soil Science Society presiding the wheat seminar, Dr Fatehullah Khan DG, ARI, Tamab; Dr Abdul Rashid, Member Bio, PAEC; Dr Muhammad Rashid, DG (Research), AARI, and Dr Abdul Majeed Country Representative ICARDA also grace the occasion.

The late sowing, lack of use of certified seed, shortage of irrigation water, drought, imbalanced use of fertilizers, non availability of fertilizer at the time of sowing and financial constrains were considered as major factors for low average wheat yield of the country.



Dr Muhammad Arshad President Soil Science Society of Pakistan & Dr Muhammad Rashid DG (Research) Ayub Agricultural Research Institute, Faisalabad, awarding the shields to the honorable speakers. From Top: Dr. Abdul Majeed, Dr. Fatehullah, Dr. Shahid Mehmood, Mr. Makhdoom Hussain receiving the shields.



Awarding and Receiving the Shields at Wheat Seminar

GENERAL BODY MEETING

Soil Science Society of Pakistan organized a mandatory General Body meeting on December 14, 2009 at Soil Fertility Institute, Thokar Niaz Baig, Lahore. Mr. Dost Muhammad Malik, Director General (Rtd.), Ayub Agricultural Research Institute, Faisalabad, and past president SSSP was the Guest of Honor. Professor Dr. Muhammad Arshad, President, SSSP chaired the meeting. More than 150 members of the society attended the meeting. The agenda of the meeting was circulated. General Secretary presented the activities of the



Audience of wheat seminar are very keenly listening the speakers.

Executive Council. Finance Secretary presented the membership status of the society and finances. The motion for the increase in the membership and registration fee was discussed at length. The house unanimously approved the enhancement of both the registration and membership fees from Rs. 200/- to Rs. 500/-. The house rejected the move for termination of life membership or an increase in the life membership fee. President, Prof. Dr. Muhammad Arshad shared his wisdom with the participants and at the end thanked Dr. Shahid Mahmood, Director, Soil Fertility Institute, for extending logistic support and other allied facilities for holding the General Body Meeting.

PROMOTIONS/SELECTIONS

Mr. Muhammad Aslam, Deputy Director (Land), NR Division, PARC has been promoted to Director (Land), NR Division, PARC, Islamabad.

Dr. M. Aslam, Dr. Arshad Ali, Dr. Fayyaz Hussain, Dr. Ejaz Rafique, Mr. Muhammad Sarwar, Dr. Ghulam Nabi, Dr. M. Mahmood-ul-Hassan and Dr. Naimatullah Bughio, Senior Scientific Officers, Land Resources Research Institute, NARC, Islamabad, have been promoted to Principal Scientific Officers.

Mr. Mumtaz Ahmad, District Soil Fertility Officer, Khushab (officiating); **Mr. Shahid Youqab Naz**, District Soil Fertility Officer, Attock (officiating); **Mr. Muhammad Javid Ahmad**, ARO, Soil Bacteriology, AARI, Faisalabad; **Mr. Khalid Mehmood**, A.O. Lab, Bhawalapur; **Mr. Abdul Gaffar** A.O. Lab, Layyah; **Mr. Muhammad Qamer Masood**, A.O. Field, Sahiwal; **Mr. Hushmat Mehmood** A.O. Lab, Rawalpindi and **Mr. Muhammad Sarfaraz Ahmad** A.O. Lab Rawalpindi have been promoted as Assistant Agricultural Chemist/District Soil Fertility Officers.

SSSP from the core of heart congratulate to all for holding new offices

Mr. Mahmood Sadiq, Soil Survey Research Officer, Soil Survey of Pakistan, Lahore, has been selected as Deputy Director in Soil Survey of Pakistan, through Federal Public Service Commission. **Well done Mr Mahmood.**

Mr. Nisar Ahmed, Assistant Research Officer, Pesticide Quality Control Lab, Faisalabad, and **Dr. Abaid-ur-Rehman**, Agriculture Officer, Soil and Water Testing Lab, Attock, have been selected as Agricultural Chemist through Punjab Public Service Commission and awaiting their posting. **Well done chaps.**

AWARDS AND HONORS

Dr. Iftikhar Ahmed, Senior Scientific Officer at Plant Biotechnology Program, National Agricultural Research Centre, Islamabad has been awarded Research Productivity Allowance 2008 by Pakistan Council of Science & Technology on his research achievements.



Dr. Sarfraz Hussain, Agricultural Chemist, Pesticide Quality Control Laboratory, Faisalabad, has been awarded Research Productivity Allowance 2008 by Pakistan Council of Science & Technology on his research achievements.



Miss Shabana Ihsan, Assistant Research Officer, Soil Chemistry Section, AARI, Faisalabad, was awarded bronze medal as third position holder in BSc (Hons) Agri, by Chancellor University of Agriculture Faisalabad / Governor of Punjab Mr. Salman Tasir.



TRANSFER/POSTING

Ch. Haq Nawaz Khan, Director General Agriculture, AJK has been posted as DG Extension Services Management Academy, Garhi Dopatta. **Raja Tariq Masood Khan** has joined as DG Agriculture. Mr Tariq graduated from University of Agriculture Faisalabad in 1983 in Agriculture Economics. He also served as Chief, Agriculture Planning and DG ESMA.

Dr. Sarfraz Hussain, Agricultural Chemist SAWCRI Chakwal joined the new assignment as Agricultural Chemist (Pesticides), Institute of Soil Chemistry and Environmental Sciences Faisalabad.

FOTO ALBUM GENERAL BODY MEETING



VISIT ABROAD

Dr Zahir A Zahir, Associate Professor, Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, presented a paper "Mitigation of salt stress in maize through rhizobacteria containing ACC-deaminase in salt affected fields" in International Conference on Soils and Ground Water Salinization in Arid Regions at Sultan Qaboos University, Muscat, Oman. He also attended International Conference on Water Conservation in Arid Regions at King Abdul Aziz University, Jeddah, Saudi Arabia and presented paper "Microbial ACC-deaminase an innovative approach for improving water use efficiency in peas (*Pisum sativum*)".

Mr Masood Ahmad Shakar, Assistant Agricultural Chemist, Soil Bacteriology Section, AARI, Faisalabad attended International Conference on Water Conservation in Arid Regions at King Abdul Aziz University, Jeddah, Saudi Arabia and presented paper "Rizosphera bacteria containing ACC-Deaminase conferred drought tolerance in wheat and cotton grown under semi arid climate".

Mr. Muhammad Javaid Ahmad, Assistant Agricultural Chemist, Pesticide Quality Control Laboratory, Faisalabad, visited Malaysia to attend TWAS Regional Young

Scientists Conference and presented a paper "Cumulative Effect of Mesorhizobium Ciceria and Azotobacter on the Growth, Yield and Nodulation in Chickpea under Rainfed Conditions".

RECENTLY COMPLETED Ph D

Dr Abid Niaz, Assistant Research Officer, Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, AARI, Faisalabad, has successfully completed his Ph D degree on "Boron dynamics in alkaline calcareous soil and its availability under wheat-cotton cropping system" under the supervision of Dr Atta Muhammad Ranjha.



Dr. Ali Raza Gurmani, Scientific Officer, Plant Physiology Program, C.S.I, NARC, Islamabad, has successfully completed his Ph.D degree on the vitally important aspect of agriculture "Salinity Tolerance" under the supervision of Prof. Dr. Asghari Bano, Department of Plant Sciences, Quaid-i-Azam University Islamabad. He has also presented Ph.D research work at



"International Workshop on Soil-Plant Interactions and Sustainable Agriculture in Arid Environments" at Shihezi University, China.

Dr. Ejaz Rafique, Principal Scientific Officer, NARC, Islamabad, earned Ph.D. from Quaid-i-Azam University, Islamabad under the supervision of Professor Dr. M. Fayyaz Chaudhary, Dean (Rtd.), Faculty of Biological Sciences, and Dr. Abdul Rashid, Member (Bio-Sciences), Pakistan Atomic Energy Commission, Islamabad. His research work was on "Integrated Nutrient Management for Sustaining Irrigated Cotton - Wheat Productivity in Aridisols of Pakistan".



Congratulation Doctors

RETIREMENTS

Dr Muhammad Rashid Director General Agriculture (Research), AARI, Faisalabad retired from government services on January 11, 2010. Dr Rashid graduated from University of Agriculture Faisalabad. He earned the BSc (Hons) 1971 and MSc (Hons) 1973 with distinction (bronze and silver medals). He completed his PhD (1983) and Post Doctoral Fellowship (1990) from IRRI Philippine. He started his career as Research Assistant in 1973 then selected as Assistant Agricultural Chemist in 1975. He served the department as Agriculture Chemist from 1983 to 1995. He joined as Director Soil and Water Conservation Research Institute Chakwal in 1995. From June 2007 to his retirement he served as Director General (Research). Dr Rashid is dedicated to his profession. During his DG ship the post of Assistant Specialist (17+Rs.150) was up graded to BS 18. He contributed a lot in the restructuring of the AARI. He is the founder of Foundation Seed Cell at AARI. His services to the department are ever lasting. After retirement University of Agriculture got his services as Subject Specialist /Coordinator. We pray for his best health.



Ch Muhammad Akram, Director, SAWCRI, Chakwal, retired on 3-3-2010. Ch Akram completed his school education from Lahore in 1965 and graduated from University of Agriculture, Faisalabad in 1970 and earned master in 1973. He started his career from Agriculture Research Station Bhawalpur in 1972. During his career he served the department as



Assistant Agri. Chemist, Pesticide Quality Control Lab Multan; Assistant Agri. Chemist (SF), Bhawalpur; Agricultural Chemist, Soil and water Testing Lab Multan; Agricultural Chemist (SF) Bhawalpur and Director, SAWCRI, Chakwal. During his service he was devoted worker. We pray for his best health.

Dr Muhammad Younus Nadem, Agriculture Chemist (Pesticides), Institute of Soil Chemistry and Environmental Sciences, AARI, Faisalabad, retired from government service from 3-2-2010. Dr Nadeem completed his BSc (Hons) Agri and MSc (Hons) Agri in 1971 & 1973 from University of Agriculture Faisalabad. He earned the PhD degree in 1994 from same University. Dr Nadeem joined the government department as Assistant Research Officer in 1975. Dr Nadeem is dedicated worker and served the department in various positions. He was promoted as Assistant Agriculture Chemist in 1986 and to Agricultural Chemist in 2003 and retired as Agricultural Chemist (Pesticides). We pray for his best health.



Mr Ahmad Hussian, Agricultural Chemist, Soil and water Testing Lab, Gujranwala, retired from government service. He completed his school education from Gujranwala in 1966. He passed the BSc (Hons) and MSc (Hons) in 1971 and 1973 from University of Agriculture Faisalabad. He joined the government service as Research Assistant and promoted to Assistant Agri. Chemist, in 1986 in Soil and Water Testing Lab, Gujranwala. He retired as Agricultural Chemist from Soil and Water Testing Lab, Gujranwala. May Allah bless him good health.

SAD DEMISE

Mian Muhammad Ashraf (1953-2010), Soil Chemist, Rice Research Institute, Kala Shah Kaku, laid to rest in January 2010. He born in Kasur and completed his school education from there as well. He graduated from University of Agriculture Faisalabad in 1975 and got master in 1977 from same university. He joined the government service in 1979 and served the Agriculture Department in various positions. At the time of death he was serving the department as Soil Chemist, Rice Research Institute, Kala Shah Kaku. May God rest his soul in eternal peace.



Dr Rahmatullah (1949-2010), Professor (retired), Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, expired in January 2010. Dr Rahmatullah was born in Sialkot and completed his school education from Daska,

bachelor and master from University of Agriculture Faisalabad. He got distinction in BSc. (Hons) and won silver medal. He went to Pennsylvania State University USA and did another master in 1978. He got PhD in 1991 from Justus-Liebig University Germany. Dr Rahmatullah started his career as Senior Scientific Officer NIAB, Faisalabad in 1974. He served the NARC from 1984 to 2000 in various positions. He joined the University of Agriculture Faisalabad as Associate Professor in 2000. He retired as professor in 2009 and served the department as Subject Specialist till death. Dr Rahmatullah was member of many societies like Soil Science Society of Pakistan, Soil Science Society of America, Indian Society of Soil Science, Pakistan Botanical Society and Pakistan Association of Advancement of Science. He was the author/coauthor of many research publications. He supervised 31 MSc. and 7 PhD scholars. God may rest his soul in eternal peace.



The Soil Science Society shares the grief and sorrow with the both deceased's families and prays for the departed soul.

Please send your full length paper of oral/poster presentations in 13th Soil Science Congress for publication in Soil & Environment by April 15, 2010. The paper will be published after peer review. The instruction for author may be downloaded from journal web site www.ss.org.pk

BOOKS

Organic Farming: The Ecological System
Charles Francis, editor, compiles a current look at what we know about organic farming practices and systems. Learn about history and certification, ecological knowledge as the basis of sustainability, biodiversity, crop/animal systems, forages, grain, oil seed, specialty crops, soil nutrient needs, vegetation and pest management, marketing, food security, education and research, and the future outlook. Combining farmer experience and wisdom with the best that science has to offer can help us better understand organic systems and how to design them to meet human needs and preserve an environment where we would like to live. Hardcover, 378 pages, 2009; ASA, CSSA, SSSA, Agron. Monogr. 54. ISBN: 978-0-89118-173-6.



Nitrogen Fixation in Crop Production

The only book of its kind to present the science, application, and politics of the use of nitrogen-fixing crop plants across the globe in various environments, Nitrogen Fixation in

Crop Production is a problem-solving look forward to the next Green Revolution. Nitrogen fixation can help provide a growing population with a nutritious, environmentally friendly, sustainable food supply. From new "omics" approaches to the role of nitrogen fixation in mitigating greenhouse gas emissions, from farming strategies in non-industrialized nations to nitrogen fixation in the global economy, scientists will find the key issues and expanding research areas, and how they contribute to the next wave of advancements related to agriculture and the environment. David W. Emerich and Hari B. Krishnan, ed. Hardcover, 422 pages, 2009. ASA, CSSA, SSSA, Agron. Monogr. 52. ISBN: 978-0-89118-170-5.



AGRICOLA and CHEM ABST have started the indexing of the *Journal of Soil and Environment* in addition to *Agris*. Surely it will enhance the rating of our Journal.

Please send your postal address & telephone number to Mr. Ajmal Khan Agriculture Chemist, AARI, Faisalabad to update the Directory Soil Scientist ajmalkhan54@gmail.com

News and views, for coming issue of Soil Science News, may be sent to:

- Dr Shahid Javid, Editor, Soil Science News/Associate Agri. Chemist, Institute of Soil Chemistry and Environmental Sciences, AARI, Faisalabad. sjavid61@gmail.com
- Mr Ajmal Khan, Associate Editor of Soil Science News/Agri. Chemist (Soil), Institute of Soil Chemistry and Environmental Sciences, AARI, Faisalabad. ajmalkhan54@gmail.com
- Mr Gulam M Jamro, Assistant Professor, Department of Soil Science, Sindh Agriculture University, Tandojam. gmjamro@gmail.com
- Dr M Mehmood-ul-Hussian PSO, LRRi, NARC, Islamabad. mmh@comsats.net.pk
- Prof Dr Zahir Shah, Deptt. of Soil and Environmental Sciences NWFP Agriculture University, Peshawar. zahinsh@brain.net.pk
- Syed Waseem-ul-Hussian, Agronomist, ARI, Saniab, Quetta. waseemulqta@hotmail.com
- Dr M Bashir Butt, Director (Agri. Research) Muzaffarabad, AJK. mabbutt@yahoo.com

