

Day 1 :: 18th March 2014

Registration (09:00 – 09:30)

Inaugural Session (09:30 – 11:00)

Tea Break 11:00 – 11:30

Planery Session (11:30 – 13:00)

Lunch/Prayer Break 13:00 – 14:00

Oral Presentation:

Day 1	14:00 – 15:30, 18 th March 2014	
	Session-1A: Soil Fertility and Plant Nutrition	Session-1B: Soil Microbiology and Biochemistry
1	<p>Molecular characterization of two wheat genotypes with contrasting phosphorus use efficiency <i>Tariq Aziz</i> Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>Analysis of bacterial diversity in maize rhizosphere microbiom under field conditions <i>Muhammad Sajjad Mirza</i> National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan</p>
2	<p>Effect of organic and inorganic fertilizers on crop productivity and selected soil properties of water eroded land <i>Ishaq Ahmad Mian</i> Soil and Environmental Sciences, The University of Agriculture Peshawar, Pakistan</p>	<p>Cyanobacterization: An efficient method of soil conditioning <i>Mehboob Ahmed</i> Department of Microbiology and Molecular Genetics, University of the Punjab, Lahore, Pakistan</p>
3	<p>Fertigation: An emerging trend for managing high and balanced nutrient needs of high yielding crops <i>Ghulam Rasool</i> GR Agro Services and Bioag, Pakistan</p>	<p>Bacterial rhizosphere and endosphere populations of grasses and trees to be used for the remediation of soil contaminated with hydrocarbons <i>Muhammad Afzal</i> Soil and Environmental Biotechnology Division, National Institute for Biotechnology and Genetic Engineering (NIBGE), Jhang Road, Faisalabad, Pakistan</p>
4	<p>Effectiveness of biochar in soil conditioning under simulated ecological conditions <i>Samia Qadeer</i> Department of Environmental Sciences, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan</p>	<p>Molecular identification and plant growth promoting characterization of rhizobacteria isolated from rhizosphere of mash bean <i>Muhammad Ehsan</i> National Institute for Genomics and Advanced Biotechnology (NIGAB), National Agricultural Research Center, Islamabad, Pakistan</p>
5	<p>Enhancing wheat yield and phosphorus use efficiency through foliar application in calcareous soil <i>Dost Muhammad</i> Department of Soil and Environmental Sciences, The University of Agriculture, Peshawar</p>	<p>Effect of foliar application of L-methionine on physiological, biochemical and growth parameters of wheat at two levels of nitrogen <i>Zulfiqar Ahmad</i> Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad</p>
6	<p>Effect of foliar application of L-tryptophan on growth and yield of tomato (<i>Solanum lycopersicum</i> L.) <i>Noor-ul-Ain</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>Potential of integrated use of biogas slurry and biofertilizer to improve wheat yield and soil health <i>Maqshoof Ahamd</i> University College of Agriculture and Environmental Sciences, the Islamia University of Bahawalpur, Pakistan</p>
7	<p>Influence of boron on the yield, quality and micronutrients content of tobacco (<i>Nicotiana tabacum</i> L.) <i>Muhammad Tariq</i> Department of Soil and Environmental Sciences, Faculty of Crop Production Sciences, The University of Agriculture, Peshawar- Khyber Pakhtunkhwa, Pakistan</p>	<p>Comparative efficacy of single-, co- and multi-strain inoculation for improving growth, physiology and nutrient balance of wheat under salinity stress <i>Muhammad Yahya Khan</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
8	<p>Effect of bio-stimulant coated smart fertilizer on growth, yield and phosphorus uptake of maize (<i>Zea mays</i> L.) under field conditions <i>Asif Pasha</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>Efficacy of bacterially impregnated fertilizers for improving growth and yield of wheat (<i>Triticum aestivum</i> L.) <i>Shakeel Ahmad</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
9	<p>Zinc and phosphorus adsorption in different textured soils; an incubation study <i>Muhammad Imran</i></p>	<p>Comparative effect of different P sources in combination with phosphate solubilizing bacteria (PSB) on growth and yield of green</p>

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	Department of Soil Science, Bahauddin Zakariya University, Multan, Pakistan	pepper (<i>Capsicum annum L.</i>) <i>Nighet Musa</i> Department of Soil and Environmental Sciences, The University of Poonch Rawalakot, Azad Kashmir, Pakistan
10	Increase in yield and quality of plum through foliar application of zinc, iron and boron <i>Rafiullah</i> Department of Soil and Environmental Sciences, The University of Agriculture, Peshawar, Pakistan	Efficacy of different <i>Mesorhizobium ciceri</i> and <i>Rhizobium leguminosarum</i> strains for inducing salinity tolerance in maize (<i>Zea mays L.</i>) under gnotobiotic conditions <i>Qasim Ali</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
11	Interactive effect of humic acid and phosphorus on growth, yield and quality of canola (<i>Brassica napus L.</i>) at Rawalakot Azad Jammu and Kashmir <i>Maryam Tariq</i> Department of Soil and Environmental Sciences, The University of Poonch, Rawalakot, Azad Jammu and Kashmir, Pakistan	Toxic effects of copper on plant growth can be mitigated by the inoculation of copper resistant bacteria isolated from industrial effluent <i>Rehman Gul</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
12	Maize crop yield and soil nutrient concentration under the application of zinc and boron with NPK <i>Israr Asghar</i> Department of Agriculture, Research Wing, Soil and Water Testing Laboratory, Bhimber, AJK, Pakistan	Potential of various carrier materials to improve the performance of multi-strain bacterial inoculation for promoting growth, nodulation and yield of mungbean under field conditions <i>Atif Ali</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
13	Response of wheat yield and soil phosphorus and potassium to different levels of Zn with NPK <i>Saeed-ur-Rehman Qureshi</i> Department of Agriculture, Research Wing, Soil Fertility Laboratory, Muzaffrabad, AJK, Pakistan	Integrated effect of rhizobial inoculum and inorganic fertilizers on nutrients mineralization and growth of wheat crop <i>Muhammad Adnan</i> Department of Soil and Environmental Science, The University of Agriculture, Peshawar
Tea Break 15:30 – 16:00		

Day 1	16:00 – 17:30, 18th March 2014	
	Session-2A: Soil Fertility and Plant Nutrition	Session-2B: Soil Microbiology and Biochemistry
1	Impact of plant and animal derived biochar on maize growth, wheat yield and soil physico-chemical properties <i>Ahsan Ali</i> Department of Soil and Environmental Sciences, The University of Poonch, Rawalakot, Azad Jammu and Kashmir, Pakistan	Plant-microbe interactions for improved phytoremediation of organic pollutants <i>Sohail Yousaf</i> Department of Environmental Sciences, Quaid-i-Azam University, Islamabad, Pakistan
2	Effect of nitrogen placement on quantitative attributes of sugar beet <i>Mohammad Nauman Khan</i> The University of Agriculture, Peshawar	Effect of Cr-tolerant bacteria on growth and Cr accumulation in sunflower (<i>Helianthus annus L.</i>) <i>Rizwan Ahmad</i> Land Resources Research Institute, National Agricultural Research Centre, Islamabad, Pakistan
3	Boron nutrition for improving the performance of water-saving rice production systems <i>Atique-ur-Rehman</i> Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan	Cumulative effect of gibberellic acid and press mud for improving growth and yield of sunflower in chromium contaminated soil <i>Muhammad Saleem</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
4	Response of adequate and deficient levels of phosphorus on wheat	Synergistic use of <i>Burkholderia phytofirmans</i> with <i>Pseudomonas</i> and

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	<p>genotypes <i>Parvez Khan</i> Nuclear Institute for Food and Agriculture, Peshawar</p>	<p>Rhizobium spp. for improving growth and yield of rice under field conditions <i>Tasawar Abbas</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
5	<p>Use of super absorbent polymers for efficient growth of maize (<i>Zea mays</i> L.) under drought stress <i>Zeeshan Hassan</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan</p>	<p>Physio-chemical analysis of soil and pathological assessment of foliar rust disease of rainfed wheat of Punjab <i>Syeda Qamar Batool</i> Fatima Jinnah Women University, The Mall, Rawalpindi</p>
6	<p>Effect of foliar application of copper levels on yield and quality of tobacco (FCV type) <i>Shamsher Ali</i> Department of Soil and Environmental Sciences, The University of Agriculture Peshawar, Amir Muhammd Khan Camous Mardan, Pakistan</p>	<p>Impact of bio-inoculants for improved growth and yield of wheat under water deficit field conditions in Bahawalpur <i>Muhammad Hasnain</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
7	<p>Effective method of boron application for maximization of tomato yield <i>Saeed Ahmad</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>Effect of arbuscular mycorrhizal fungi on phytoremediation of heavy metals and yield of wheat crop <i>Asif Khan</i> Department of Soil and Environmental Science, The University of Agriculture, Peshawar</p>
8	<p>The combined use of nitrogen and zinc improves growth, yield and quality of maize fodder under arid climate <i>Abid Sajad</i> University College of Agriculture and Environmental Sciences, The Islamia University of Bahawalpur, Bahawalpur, Pakistan</p>	<p>Impact of PGPR and different levels of nitrogen from biogas slurry and chemical fertilizer to improve growth and yield of Okra <i>Qudsia Nazir</i> Institute of soil and Environmental Sciences, University of Agriculture, Faisalabad-Pakistan</p>
9	<p>Effect of foliar and soil applied boron fertilizer integrated with farm and poultry manure on uptake of boron and growth and yield of maize (<i>Zea mays</i> L.) <i>Nouman Majeed</i> Department of Soil Science, BZU, Multan</p>	<p>Differential response of rhizobacterial strains for inducing salinity tolerance in different lentil varieties <i>Sajid Mahmood</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad</p>
10	<p>Effect of nitrogen levels on yield of Colocasia (<i>Colocasia esculenta</i>) at farmer's field in district Malakand <i>Rafiq Ahmad</i> Department of Soil and Environmental Sciences, The University of Agriculture, Peshawar</p>	<p>Decolorization of reactive dyes by pure microbial strains and consortia to remove toxicity from textile effluent <i>Sabaina Tahir</i> Department of Environmental Sciences, Quaid-i-Azam University, Islamabad, Pakistan</p>
11	<p>Effect of macronutrients (P & K) on yield and yield components of sweet pepper <i>Mehwish Fida</i> Agriculture Research Station Baffa, Mansehra</p>	<p>Effect of microbially produced auxins on the performance of maize (<i>Zea mays</i> L.) under salt stress <i>Muhammad Asif Iqbal</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
12	<p>Growth and yield response of maize to soil application of boron <i>Muhammad Awais Khalid</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad</p>	<p>Screening of locally available carrier materials to improve the performance of multi-strain inoculation for promoting nodulation, growth and yield of mung bean <i>Muhammad Adnan Altaf</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan</p>
13	<p>Development of nutritionally enriched, high yielding, drought and disease tolerant double haploid wheat genotype <i>Muhammad Tariq</i> Barani Agricultural Research Institute, Chakwal, Pakistan</p>	<p>Integrated use of compost and phosphate solubilizing bacteria for improving growth and yield of carrot <i>Zahid Imran</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>

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Day 2	09:00 – 10:30, 19 th March 2014	
	Session-3A: Soil Fertility and Plant Nutrition	Session-3B: Soil Physics
1	<p>Effective approach to enhance phosphorus availability through use of smart phosphatic fertilizer <i>Muhammad Yaseen</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad</p>	<p>Short-term effect of intercropping and crop rotation on soil physical conditions of an Alfisol under Tung (<i>Aleurites fordii</i>, Helms)-based agroforestry system in Southern Brazil <i>Awe Gabriel Oladele</i> Department of Soil Science, Federal University of Santa Maria (UFSM), Santa Maria, Brazil</p>
2	<p>Enhancing zinc concentration in wheat (<i>Triticum aestivum</i> L.) by selecting Zn efficient genotypes <i>Muhammad Imtiaz</i> Soil Science Division, Nuclear Institute for food and Agriculture, Tarnab, Peshawar, Khyber Pakhtunkhwa</p>	<p>Effect of soil moisture on carbon and nitrogen mineralization dynamics of applied crop residues in combination with starter dose of N <i>Ghulam Nabi</i> Land Resources Research Institute, National Agricultural Research Centre, Islamabad</p>
3	<p>Comparison of efficient use of liquid and solid NPK fertilizers for maximization of maize yield <i>Asif Manzoor</i> Institute of soil and Environment Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>Root proliferation and maize growth under different texture and manure rates in pot culture <i>Sana Ullah</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
4	<p>Effect of boron application on oil seed Brassica yield and quality <i>Mukhtiar Ali</i> Nuclear Institute for Food and Agriculture, Peshawar</p>	<p>Soil physical degradation assessment using S-Index under long term fertilizer use <i>Syed Shahid Hussain Shah</i> Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad</p>
5	<p>Use of hydrogel-coated urea for wheat production under drought stress <i>Sana Mansoor</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>Soil physico-chemical health indices and wheat yield as altered by various levels of farm manure and wheat straw applied as soil surface cover <i>Haroon Shahzad</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad</p>
6	<p>Comparative effect of soil and foliar application of sulfur on maize <i>Qamar Sarfaraz</i> Department of Soil and Environmental Sciences, Faculty of Crop Production Sciences, The University of Agriculture, Peshawar</p>	<p>Effect of deficit irrigation and mulch on soil physical properties and growth and yield of maize (<i>Zea mays</i> L.) <i>Rizwan Yaseen</i> Department of Soil Science, Bahauddin Zakariya University, Multan, Pakistan</p>
7	<p>Zinc and phosphorus management for rice genotypes “fine vs. coarse” and its residual effect on subsequent wheat crop in rice-wheat cropping system in Malakand <i>Amanullah Jr</i> Department of Agronomy, The University of Agriculture, Peshawar</p>	<p>Effect of prolonged irrigated fodders on soil physical properties and agronomic water use efficiency at livestock farm Jugait-Peer, Bahawalpur <i>Zahid Murtaza</i> Institute of soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
8	<p>Effectiveness of combinations of NPK and calcium carbide on growth, yield and nutrient use efficiency of cotton (<i>Gossypium hirsutum</i> L.) crop <i>Hassan Mehmood</i> Department of Soil Science, Bahauddin Zakariya University, Multan, Pakistan</p>	<p>Temporal variability of soil physical and hydraulic properties under different tillage and irrigation management in maize <i>Shahid Maqsood Gill</i> Land Resources Research Institute, National Agricultural Research Centre, Islamabad, Pakistan</p>
9	<p>Grain Zn-concentration of fine-grain aromatic rice (<i>Oryza sativa</i> L.) as affected by Zn fertilization at various growth stages <i>Zeeshan Ahmad</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>	<p>The effect of organic and inorganic sources of nitrogen on soil physical properties, crop yield and NO₃-N movement in soil <i>Zeeshan Aslam</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>

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10	Influence of polymer and polymer cum bio-stimulant coated DAP on the growth and yield parameters of maize (<i>Zea mays</i> L.) <i>Kashif Hussain</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Soil properties, crop yield and economics under conservation tillage in smallholder dryland farming system of Pakistan <i>Muhammad Sharif</i> Department of Soil Science & SWC, PMAS-Arid Agriculture University Rawalpindi, Pakistan
11	Assessment of the availability of phosphorus from rock phosphate incubated with farm yard manure <i>Altaf Hussain Laori</i> Sindh Agriculture University, Tandojam, Pakistan	Effect of drying and rewetting cycles on cereals depending on plant community composition <i>Hafiz Tanvir Ahmad</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan

Tea Break (10:30 – 11:00)

Day 2	11:00 – 12:30, 19 th March 2014	
	Session-4A: Soil Salinity Soil Chemistry	Session-4B: Soil Microbiology and Biochemistry
1	Holistic approach for biomass production on extremely saline water-logged soil at Dukhan Sabkha in Qatar <i>Riaz Ahmad Wahed</i> Department of Radiations and Hazardous Chemicals Protection, Ministry of Environment, Doha, Qatar	Agronomic effectiveness and P utilization efficiency of rock phosphate supplemented with phosphate solubilizing bacteria and organic amendments applied to wheat <i>Muhammad Kaleem Abbasi</i> Department of Soil and Environmental Sciences, Faculty of Agriculture, The University of Poonch, Rawalakot, Azad Jammu and Kashmir, Pakistan
2	Phytoavailability of potassium to <i>Zea mays</i> L. grown in agricultural soils with contrasting textures and mineralogy <i>Irshad Bibi</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Faisalabad, Pakistan	Bacterial characterization under stress condition and their comparative efficacy to improve salt tolerance of cucumber <i>Sajid Mahmood Nadeem</i> Sub-campus Burewala, University of Agriculture, Faisalabad, Pakistan
3	Alleviation of oxidative stress in tomato by potassium application under salt stress <i>Muhammad Anjad</i> Institute of Soil and Environmental Sciences University of Agriculture, Faisalabad, Pakistan	Factors regulating microbial activity in chromium contaminated abandoned agricultural soils <i>Muhammad Riaz</i> Department of Environmental Science, Government College University Faisalabad, Faisalabad, Pakistan
4	Comparative response of maize hybrids to cadmium stress and its effect on the uptake of some micronutrients <i>Tasneem Akhtar</i> Institute of Soil and Environmental Sciences University of Agriculture, Faisalabad, Pakistan	Inoculum density and genotype effects on growth promotion and endophytic colonization of potato (<i>Solanum tuberosum</i>) inoculated with <i>Burkholderia phytofirmans</i> PsJN <i>Muhammad Naveed</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
5	Effect of calcium chloride (CaCl₂.2H₂O) salinity and boron toxicity on wheat (<i>Triticum aestivum</i> L.) <i>Aneela Riaz</i> Soil Bacteriology Section, Ayub Agricultural Research Institute, Faisalabad	Use of antagonistic bacteria to reduce disease incidence of bacterial leaf blight in rice <i>Sumera Yasmin</i> National Institute for Biotechnology and Genetic Engineering, Faisalabad
6	Effect of supplementary potassium application on mitigating sodium chloride toxicity in spinach (<i>Spinacia oleracea</i>) <i>Muhammad Tahir</i> Institute of Soil and Environmental Sciences University of Agriculture Faisalabad	Cadmium tolerant bacteria induce metal stress tolerance in cereals <i>Iftikhar Ahmad</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan

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7	Potassium dynamics in saline soils developed for research trials to study sodium- potassium interactions in soil and plant <i>Mehreen Gul</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan	Improving the productivity of maize through salt tolerant rhizobial spp. <i>Shahab Ahmad Khosa</i> Department of Soil Science & SWC, PMAS-Arid Agriculture University, Rawalpindi
8	Profile distribution of different forms of K in some benchmark soils of Pakistan <i>Sadia Hussain</i> Sindh Agriculture University, Tandojam	Varied drought tolerance exhibition of endophytic bacteria isolated from different tissues of chickpea <i>Muhammad Usman Jamshaid</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
9	Effect of exogenous application of salicylic acid on the growth of wheat under salinity and boron stress <i>Sidra Tul Ain Anam</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Bioremediation of non-volatile hydrocarbons by microorganisms under influence of light and dark environment <i>Aqib Hassan Ali Khan</i> Department of Environmental Sciences, Quaid-i-Azam University, Islamabad, Pakistan
10	Effect of different organic sources on the availability of applied phosphate in different textured soils <i>Fatima Bibi</i> Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad	Bacterial inoculation enhances ability of sunflower (<i>Helianthus annuus</i>) to extract metals from soil <i>Asim Aziz</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
11	Interactive effect of salinity and water stress on growth and ionic composition of buttonwood (<i>Conocarpus erectus</i> L.) <i>Muhammad Asif</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Enhancement of drought tolerance in wheat (<i>Triticum aestivum</i> L.) by endophytic bacteria <i>Ana Aslam</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
12	Selection and characterization of salt-tolerant and salt-sensitive maize (<i>Zea mays</i> L.) genotypes against salinity <i>Munaza Batool</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Evaluating the effect of foliar application of L-methionin and L-tryptophane on growth, yield, nodulation and early flower induction in mungbean(<i>Vigna radiata</i> L.) <i>Muhammad Bilal</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
13	Screening of cotton (<i>Gossypium hirsutum</i> L.) varieties/genotypes against salinity and boron stress <i>Muhammad Aftabn</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad	

Lunch/Prayer Break (12:30 – 13:30)

Day 2	13:30 – 15:00, 19 th March 2014	
	Session-5A: Soil Fertility and Plant Nutrition	Session-5B: Soil and Water Conservation Soil/Water/Air Pollution
1	Integration of biochar with animal manure and nitrogen for improving maize yields and soil properties in a semi-arid agro-ecosystem <i>Muhammad Arif</i> Department of Agronomy, The University of Agriculture, Peshawar, Khyber	The phosphorus content of fluvial suspended sediment in a mixed land use catchment in southern Brazil <i>Mohsin Zafar</i> Department of Soil Science, Universidade Federal de Santa Maria (UFSM), CEP 97105-900 Santa Maria, RS-Brazil

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2	Rice grain enrichment for zinc: Agronomic or genetic interventions <i>Hafeez ur Rehman</i> Department of Crop Physiology, University of Agriculture, Faisalabad, Pakistan	Estimation of greenhouse gas emission from rice soils of Kedah, Malaysia through denitrification and decomposition model <i>Rabail Gandahi</i> Department of Land Management, Faculty of Agriculture, Universiti Putra Malaysia, 43400, Serdang, Selangor, Malaysia
3	Impact of banana residues based compost on maize productivity <i>Ayaz Mehmood Virk</i> Sindh Agriculture University, Tandojam	Impact of soil parameters and pesticide application history on dynamics of isoproturon mineralization within a French agricultural field <i>Sabir Hussain</i> INRA, UMR 1347 Agroecologie, 17 rue sully, BP 86510, 21065 Dijon Cedex, France
4	Growth response of maize to applied phosphatic fertilizer with and without organic soil conditioner <i>Tahir Abbas</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Spatial distributing pattern of aerosols in metropolitan areas of Faisalabad using GIS based approach <i>Khalid Mehmood</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
5	Use of ascorbic acid for improving cucumber growth and yield <i>Naveeda Anwar</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Soil carbon sequestration and its correlation with physico-chemical properties under different land use, soil type and climatic conditions of Azad Jammu and Kashmir <i>Mehwish Matien</i> The University of Poonch, Rawalakot, Azad Jammu and Kashmir-Pakistan
6	Determination of optimum duration and maximal concentration of zinc and phosphorus for priming wheat seeds and its effect on emergence and yield of wheat <i>Abdus Samad</i> Department of Soil and Environmental Sciences, University of Agriculture, Peshawar	Efficiency of various kinds of magnetite to catalyze chemical oxidation of nalidixic acid in contaminated water <i>Dawood Khizer Khan</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
7	Integrated nutrient management in banana: comparative role of FYM and composted press mud in improvement of soil properties <i>Ambrin Rajput</i> Sindh Agriculture University, Tandojam	Integrated system for producing biogas and low phytotoxic digestate form anaerobic co-digestion of catering waste and wheat crop residues <i>Muzammil Anjum</i> Department of Environmental Sciences, PMAS-Arid Agriculture University, Rawalpindi
8	Biofortification of zinc in wheat grain <i>Ifra saleem</i> Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad	An assessment of the soil properties of the landfill sites under Capital Development Authority (CDA) Islamabad <i>Maria Hameed Meer</i> Department of Environmental Sciences, Fatima Jinnah Women University, Rawalpindi
9	Soil health and fertility status of Kasur district <i>Ijaz Mehboob</i> Soil and Water Testing Laboratory, Kasur, Pakistan	Potential of micro- and nano-magnetite to remove heavy metals from wastewater via adsorption <i>Zeeshan Ajmal</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
10	To study the efficiency and economics of nitrogen enriched compost (NEC) on wheat crop <i>Allah Nawaz</i> Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute Faisalabad	An assessment of soil and vegetation in the urban green spaces of Rawalpindi, Pakistan <i>Aasma Bibi</i> Department of Environmental Sciences, Fatima Jinnah Women University, Rawalpindi
11	Variations in different physiological and morphological characteristics of sweet pepper cv. Royal wonder on foliar	Incorporated use of drain and canal water in sugar beet under coastal climate of Thatta

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	application of salicylic acid <i>Wazir Ahmed</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	<i>Ghulam Moheyuddin Kaloi</i> National Sugar and Tropical Horticulture Research Institute, Thatta
12	Zinc requirement for optimum grain yield and zinc biofortification depends on phosphorus application to wheat cultivars <i>Waqas-ud-Din Khan</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Salicylic acid effect on yield and yield attributes of various maize varieties under drought stress <i>Inamullah</i> Department of Agronomy, The University of Agriculture, Peshawar, Pakistan
13	Growth and yield response of <i>Zea mays</i> L. to foliar application of L-tryptophan <i>Syed Hamid Muzamal</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Proper irrigation and nitrogen application enhance the quality and yield of wheat <i>Ghazal Miraj</i> Agriculture Research Institute, Tarnab Peshawar, Pakistan
14	Effect of phosphorus and zinc seed priming on emergence and yield of maize <i>Fazal Munsif</i> Department of Agronomy, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan	Metal ions diversification in soil, water and plants of Jinnah and Lyallpur town, Faisalabad and GIS based mapping <i>Syed Arif Hussain</i> Institute of Soil and Environmental Sciences University of Agriculture, Faisalabad, Pakistan

Tea Break (15:00 – 15:30)

Day 2	15:30 – 17:00, 19 th March 2014	
	Session-6A: Soil and Water Conservation Soil/Water/Air Pollution	Session-6B: Soil Microbiology and Biochemistry
1	Effect of chromium on biodegradation of reactive black-5 azo dye by <i>Psychrobacter</i> and <i>Klebsiella</i> spp. <i>Azeem Khalid</i> Department of Environmental Sciences, PMAS Arid Agriculture University, Rawalpindi, Pakistan	Rock phosphate solubility through soil microorganisms and its effect on crops yield <i>Muhammad Sharif</i> Department of Soil and Environmental Sciences, The University of Agriculture, Peshawar
2	Effect of phosphate on the phytoextraction of arsenic from arsenic-contaminated soils using <i>Brassica juncea</i> L. and <i>Brassica napus</i> L. <i>Nabeel Khan Niazi</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Faisalabad, Pakistan	Impact of plant growth regulators and <i>Rhizobium</i> inoculum on yield of chickpea <i>Muhammad Amjad Qureshi</i> Soil Bacteriological Section, Agri-Biotech Research Institute, AARI, Faisalabad
3	Role of foliar applied zinc in minimizing cadmium accumulation in wheat grains <i>Hina Javed</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan	Mass spectrometry profiling of <i>N</i>-acyl- homoserine- lactones produced by PGPR and their role in plant growth and development <i>Asma Imran</i> National Institute for Biotechnology and Genetic Engineering (NIBGE), Jhang Road, Faisalabad, Pakistan
4	Isolation and identification of rhizospheric bacteria for the degradation of benzene	Efficacy of <i>Rhizobium phaseoli</i> and <i>Mezorhizobium ciceri</i> for improving photosynthesis, productivity and mineral nutrition of

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	<i>Muhammad Saad Bin Zahid</i> Institute of Environmental Sciences and Engineering, School of Civil and Environmental Engineering, National University of Science and Technology, Islamabad, Pakistan	maize in field conditions <i>Muhammad Baqir Hussain</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
5	Effects of silicon on growth and physiology of wheat seedlings (<i>Triticum turgidum</i> L. cv. Claudio) under Cd stress <i>Muhammad Rizwan</i> CEREGE – CNRS/ Aix-Marseille Université, Aix-en-Provence, France	Evaluating the effect of 2, 4 dichlorophenoxyacetic acid (2,4-D) on growth, yield, nodulation and early flower induction in mungbean (<i>Vigna radiata</i> L.) <i>Muhammad Adnan Latif</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan
6	Effect of amendments on stabilization of heavy metals in soil irrigated with untreated wastewater <i>Farmanullah Khan</i> Directorate of Soil and Water Conservation Khyber Pakhtunkhwa, Peshawar, Pakistan	Influence of phosphorus solubilizing bacteria (PSB) and inorganic fertilizers on P utilization efficiency, growth and yield traits of wheat <i>Shaila Altaf</i> Department of Soil and Environmental Sciences, The University of Poonch, Rawalakot, Azad Jammu and Kashmir, Pakistan
7	Characterization of bacterial strain ZM14 capable of simultaneous removal of reactive dyes and hexavalent chromium isolated from textile wastewater <i>Zahid Maqbool</i> Department of Environmental sciences, Government College University, Faisalabad	Loading of PGPR onto various carriers to promote the growth and yield of mungbean (<i>Vigna radiata</i> L.) <i>Muhammad Usman Saleem</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
8	Heavy metals accumulation in vegetables due to continuous use of industrial effluents <i>Fareeha Habib</i> Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad	Use of biogas slurry and plant growth promoting rhizobacteria at various levels of phosphorus to promote growth and yield of sunflower <i>Kashifa Jabeen</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
9	Heavy metal load assessment of peri-urban areas of Punjab and their toxicological implications <i>Shazia Akhtar</i> Fatima Jinnah Women University, The Mall, Rawalpindi	Effect of arbuscular mycorrhiza fungal inoculation with compost on yield and phosphorus uptake of wheat in alkaline calcareous soil <i>Bismillah Jan</i> Department of Soil and Environmental Science, The University of Agriculture, Peshawar
10	Estimation of drought tolerance in local strains of Bermuda (<i>Cynodon dactylon</i> L.) grass <i>Hafiz Muhammad Ahmad</i> Institute of Horticultural Sciences, University of Agriculture, Faisalabad	Comparative effect of impregnated phosphatic fertilizer and humate on the growth and yield of chilies (<i>Capsicum annum</i> L.) <i>Abdul Rauf Tahi</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
11	Active soil organic carbon fractions and aggregate stability as influenced by minimum tillage and crop rotations on a marginal dryland soil in Punjab, Pakistan <i>Asma Hassan</i> Department of Soil Science & SWC, PMAS-Arid Agriculture University, Rawalpindi	Interactive effect of phosphorus and molybdenum on growth, nodulation and N₂ - fixation of soybean <i>Bushra Adrees</i> Department of Soil and Environmental Sciences, The University of Poonch, Rawalakot, Azad Jammu and Kashmir, Pakistan
12	Influence of cropping system on planting water content and yields of wheat and chickpea under rainfed conditions <i>Abid Subhani</i> Barani Agricultural Research Institute, Chakwal, Pakistan	Nitrogen mineralization-immobilization turnover of a soil amended with plant residues of different quality characteristics <i>Majid Mahmood Tahir</i> Department of Soil and Environmental Sciences, The University of Poonch, Rawalakot, Azad Jammu and Kashmir, Pakistan
13	Bioaugmentation potential of selected strains for the degradation of azo dye contaminated textile effluents <i>Mateen Shafqat</i>	

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Day 3	09:00 – 10:30, 20 th March 2014	
	Session-7A: Soil Fertility and Plant Nutrition	Session-7B: Soil Salinity Soil Chemistry
1	<p>Using RP-enriched municipal waste compost for overcoming phosphorus deficiency in soil <i>Tanveer Iqbal</i> Department of Soil Science & SWC, PMAS-Arid Agriculture University, Rawalpindi</p>	<p>Examining the efficiency of an <i>In-situ</i> technique for the extraction of labile P and trace elements from sandy calcareous soils <i>Munir Ahmad</i> Department of Soil Science, College of Food and Agricultural Sciences, King Saud University, Riyadh 11451, Saudi Arabia</p>
2	<p>Effect of Si and Zn nutrition on Cd immobilization in soil and accumulation by some wheat cultivars contrasting in Cd accumulating abilities <i>Asif Naeem</i> ¹Soil Science Division, Nuclear Institute for Agriculture and Biology (NIAB), Jhang Road, Faisalabad, Pakistan</p>	<p>Application of inorganic ions to reduce Na⁺ entry and accumulation in maize (<i>Zea mays</i> L.) plants <i>Zulfiqar Ahmad Saqib</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
3	<p>Mineralizable-N in compost products as a function of rate and incubation period <i>Mohiuddin Mahar</i> Sindh Agriculture University, Tandojam</p>	<p>Effect of boron on yield and ionic concentration in rice under saline conditions <i>Rizwan Ahmad</i> Pakistan Tobacco Board, Ministry of Commerce, Government of Pakistan, Pakistan</p>
4	<p>Residual effects of boron and zinc application on subsequent wheat crop <i>Muhammad Saleem</i> Agriculture Research Institute, Tando Jam, Sindh, Pakistan</p>	<p>Determination of selected heavy metals in soil of the Rawal Lake catchment, Islamabad <i>Shaheen Begum</i> Environmental Sciences Department, Fatima Jinnah Women University, The Mall, Rawalpindi, Pakistan</p>
5	<p>Soil and crop response to humic acid applied to loam and silt loam soils: A greenhouse study <i>Tuba Arjumend</i> ¹Department of Soil and Environmental Sciences, The University of Poonch Rawalakot, Azad Jammu and Kashmir, Pakistan</p>	<p>Impact of exogenous salicylic acid on the growth of wheat (<i>Triticum aestivum</i> L.) under saline conditions <i>Bushra Atta</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan</p>
6	<p>Effect of parthenium weed compost on yield and the occurrence of verticillium wilt in chillies <i>Sadiq Hussain</i> Department of Soil and Environmental Sciences, The University of Agriculture Peshawar, Amir Muhammad Khan Campus, Mardan</p>	<p>Wheat productivity and soil health as affected by rice residue incorporation and p under saline sodic soil <i>Arshad Ali</i> Land Resource Research Institute, National Agricultural Research, Islamabad Pakistan</p>
7	<p>Effect of P- enriched compost on maize and wheat grain yield <i>Abdul Majeed</i> Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute Faisalabad</p>	<p>Characterization of wheat varieties against salinity stress <i>Ghulam Hassan Abbasi</i> Department of Soil Science, University College of Agriculture and Environmental Sciences, The Islamia University of Bahawalpur, Pakistan</p>
8	<p>Fertility assessment and mapping of farm at Amir Mohammad Khan campus, Mardan using geostatistical techniques <i>Nazia Tahir</i> Department Soil and Environmental Sciences The University of Agriculture, Peshawar</p>	<p>Interactive effect of K⁺ and NH₄⁺ nutrition on glutamine synthetase activity and protein synthesis in maize (<i>Zea mays</i> L.) under salt stress <i>Muhammad Arslan Safdar</i> Institute of Soil and Environmental Science, University of Agriculture, Faisalabad, Pakistan</p>

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9	Availability of phosphorus as a function of source P and period of incubation <i>Kamran Ali Chhajro</i> Sindh Agriculture University Tandojam	Effect of ion uptake and transport rate on salt tolerance of linseed (<i>Linum usitatissimum</i> L.) <i>Muhammad Ameen</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
10	Effect of flood water on soil physico-chemical properties and nutrient status of district Thatta <i>Muhammad Chohan</i> National Sugar and Tropical Horticulture Research Institute, Thatta	Effect of boron on gas exchange, photosynthesis and ion uptake of maize (<i>Zea mays</i> L.) under saline condition <i>Haseeb Arshad</i> Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan
11	Evaluating the potential of allelopathic crop water extracts with reduced doses of bispyribac-sodium for managing weeds in rice field <i>Muhammad Kamran</i> Department of agronomy, University of Agriculture, Faisalabad, Pakistan	Plant growth as affected by salinity and seed priming in wheat (<i>Triticum aestivum</i> L.) <i>Mohammad Shafi</i> Department of Agronomy, Agricultural University, Peshawar, Pakistan
12	Influence of early, normal and delayed nitrogen fertilization on maize <i>Riaz Muhammad Khan</i> Cereal Crops Research Institute (CCRI) Pirsabak Nowshera, Khyber Pakhtunkhwa, Pakistan	Combined effect of salinity and boron toxicity on growth and yield of field crops <i>Muhammad Awais Paracha</i> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
13	Effect of foliar application of Zn on FCV tobacco <i>Ihsan Muhammad</i> Department of Soil and Environmental Sciences, Faculty of Crop Production Sciences, The University of Agriculture Peshawar, Khyber Pakhtunkhwa	Screening of wheat varieties at early growth stage in different soils <i>Sarmad Khan</i> Department of Soil and Environmental Sciences, The University of Agriculture Peshawar, Amir Muhammad Khan Campus Mardan, Pakistan

Tea Break 10:30 – 11:00

Concluding Session (11:00 – 12:30)

Lunch 12:30

Poster Presentation:

Soil Science Society of Pakistan has decided to have the soft copy of all the posters and get them printed at its own expense. Furthermore, the Society will display them at proper place and time.

Poster Specification:

Poster Size: 30 inch x 36 inch

Resolution: Not less than 80 DPI

Format: PDF/ JPG/TIFF

Last date for poster submission (Soft Copy): **March 08, 2014.**

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Day-1: 18th March, 2014

Session 1: (14:00 – 17:00)

1. **Studying effect of osmo-priming and seed coating with selenium on seed germination and early seedling growth of wheat**
*Muhammad Idrees**, Sardar Alam Cheema, Muhammad Farooq and Abdul Wakeel
Department of Agronomy, University of Agriculture, Faisalabad, Pakistan
2. **Use of bio-slurry and chemical fertilizers for cereal production**
*Atif Muhmood**, Shahid Javid, Zahid Ashfaq Ahmad, Abdul Majeed, Asrar Hussain Shah and Tahir Majeed
Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad
3. **Effect of foliar application of humic acid and nitrogen fertilizer management on wheat grain yield**
*Shabana Ehsan**, Shahid Javid, Sadia Sultana, Fareeha Habib and Riaz Ahmad Sial
Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad
4. **Zinc application through seed treatment improves the stand establishment and productivity of wheat**
*Abdul Rehman** and Muhammad Farooq
Department of Agronomy, University of Agriculture, Faisalabad, Pakistan
5. **Interactive effect of potassium and nitrogen fertilization on stem strength of rice (*Oryza sativa* L.)**
*Umar Zaman**, Abdul Wakeel, Zeeshan Ahmad, Muhammad Farooq, Salmaan Saeed, Asif Naeem, Aabid Ilyas Dar and Mumtaz Ahmad
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
6. **Effect of biochar application on status of basic cations in alkaline soils**
*Mazhar Rafique**, Muhammad Khalid, Zahir Ahmad Zahir and Tariq Sultan
University of Agriculture, Faisalabad, Pakistan
7. **Effect of biochar on phosphorus status of calcareous soil**
*Muhammad Waqas Gohar, Muhammad Asaad Bashir, Muhammad Aon, Liaqat Ali, Hafiz Muhammad Bilal, Saeed Ahmad** and Muhammad Khalid
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
8. **Evaluating the role of humic acid, FYM and poultry manure on yield of Colocasia for organic farming in Malakand agency**
*Waseem Haider**, Maria Mussarat, Dost Muhammad and Rafiq Ahmad
Department of Soil and Environmental Sciences, AMK Campus, The University of Agriculture, Peshawar, Pakistan

9. **Low pyrolytic temperature biochar for improving soil chemical properties and growth of maize**
Muhammad Asif Naeem and Muhammad Khalid*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
10. **Influence of humic acid on phosphorus sorption in alkaline calcareous soil**
Dost Muhammad, Maria Mussrat, Muhammad Numan, and Abid Ali Khan*
Department of Soil and Environmental Sciences, The University of Agriculture, Peshawar, Pakistan
11. **Integrated use of biofertilizer with mineral nutrients to sustain wheat based cropping system under rainfed conditions of Pothwar, Pakistan**
*Mohiuddin Dilshad**
Soil Fertility Survey and Soil Testing Institute, Rawalpindi, Pakistan
12. **Effect of different nitrogen levels and sowing methods for wheat crop under salt affected conditions**
*Kashif Ashiq, Abdur Rehman, Zafar ul Hye and Muhammad Imran**
Department of Soil Science, Bahauddin Zakariya University, Multan, Pakistan
13. **Foliar feeding of L-methionine for improving physiology and yield of maize (*Zea mays* L.)**
Muhammad Saad, Muhammad Yaseen, Wazir Ahmed, Muhammad Awais Khalid, Muhammad Tahir and Ahmed Nawaz*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
14. **Studies on the effect of phosphorus on yield and nutritional quality of maize fodder**
Muhammad Zaighum Mushtaq, Nisar Ahmad, Umar Farooq and Muhammad Azhar Ali*
Biochemistry Section, Post Harvest Research Centre, Ayub Agricultural Research Institute, Faisalabad
15. **Ameliorating effect of elevated K fertilization on wheat growth under salt stress**
Muhammad Asaad Bashir, Mehreen Gul and Abdul Wakeel*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
16. **Role of Seed rate and nitrogen level in enhancing the productivity of late sown wheat**
Inamullah, Asad Ali Khan and Javed Abbas Bangash*
Department of Agronomy, The University of Agriculture, Peshawar, Pakistan
17. **Growth and potassium uptake of three wild plant species**
Shahwar Hussain, Tariq Aziz, Hafiz Muhammad Bilal, Muhammad Aamer Maqsood, Muhammad Sabir, Hamad Raza Ahmad, Ejaz Ahmad Waraich, Muhammad Asaad Bashir*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
18. **Determination of optimum duration and maximal concentration of zinc and phosphorus for priming maize seeds and its effect on germination**
Abdus Samad, Mohammad Jamal Khan, Muhammad Arif, Muhammad Rashid, Farmanullah Khan, and Yousaf Noor*
Department of Soil and Environmental Sciences, University of Agriculture, Peshawar, Pakistan
19. **Screening and categorization of maize cultivars for silicon acquisition under salinity stress**
Waqas-ud-Din Khan, Tariq Aziz, Muhammad Aamer Maqsood, Muhammad Khalid, E. Warraich and Muhammad Sabir
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
20. **Growth and phosphorus uptake of three wild plant species**

*Hafiz Muhammad Bilal**, Tariq Aziz, Muhammad Aamer Maqsood, Ehsanullah, Muhammad Sabir and Hamad Raza Ahmad
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan

21. **Comparative effect of soil and foliar applied Zn on grain yield and grain Zn concentration in two wheat genotypes different in Zn use efficiency**
*Zaghum Sattar**, Tariq Aziz, Muhammad Aamer Maqsood, Hafiz Muhammad Bilal, Shahid Hussain, Abdul Jabbar and Hammad Raza Ahmad
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
22. **Effect of compost on the growth of wheat and chickpea**
*Zahid Ali**, Haider Khan and Amir Raza
Soil Science Division, Nuclear Institute for Food and Agriculture, Tarnab, Peshawar, Khyber Pakhtunkhwa, Pakistan
23. **Evaluation of plant nutrients availability in soils of Sohawa area (Pothwar)**
*Raja Abad Raza**, Shahid Saleem, Rizwan Khalid, Ehsan ul Haq and Shahid Yaqub Naz
Soil Fertility Research Institute, Rawalpindi
24. **Impregnation of diammonium phosphate with *B. thuringiensis* to improve phosphorus use efficiency in maize (*Zea mays* L.)**
*Sobia Noor**, Muhammad Yaseen, Muhammad Arshad, Wazir Ahmed and Muhammad Awais Khalid
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
25. **Growth and yield response of wheat to application of double polymer coated diammonium phosphate**
*Imran Ali**, Shehryar, Muhammad Yaseen, Wazir Ahmed, Sobia Noor and Muhammad Awais Khalid
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
26. **Polymer coating of commercial DAP for slow and consistent release of phosphorus in soil**
*Muhammad Adnan Faisal Bajwa**, Muhammad Yaseen, Muhammad Tahir, Sobia Noor, Muhammad Awais Khalid and Wazir Ahmed
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
27. **Suitable rates with effective coating of calcium carbide for non-conventional production of bell pepper**
*Wazir Ahmed**, Muhammad Yaseen, Muhammad Arshad, Muhammad Shahid, Sumreen Siddiq, Sobia Noor and Muhammad Awais Khalid
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
28. **Response of lentil to organic and inorganic fertilizers and foliar application of sulphur and zinc**
*Inayat ur Rahman Arsha**, Wiqar Ahmad, Muhammad Nauman Khan Amjad Qayyum, Ihsan Muhammad and Amir Zeb
The University of Agriculture, Peshawar, Pakistan
29. **Response of mungbean (*Vigna radiata* L.) yield and quality under different levels of nitrogen and phosphorus with inoculum sources**
*Hafiz Salman Saeed**, Fahd Rasul and Ali Ahsan Bajwa
Department of Agronomy, University of Agriculture, Faisalabad, Pakistan
30. **Evaluation of physico-chemical properties and fertility status of rice tract area of Jafarabad, Baluchistan Pakistan**
*Muhammad Azam Solangi**, Ambrin Rajput and Sohail Ahmed Qureshi
Agriculture Research Sindh Tandojam, Agriculture, Prices and Supply Department, Government of Sindh, Pakistan
31. **Comparison of zinc enriched compost and mineral zinc fertilizer on growth and zinc use efficiency in wheat**
*Asrar Hussain Shah**, Shahid Javid, Riaz Ahmad Sial, Muhammad Anwar Ranjha, Abdul Majeed and Allah Nawaz
Soil Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad, Pakistan

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32. **Integrated use of NPK fertilizer and spentwash in cotton**
*Gaji Bux Bugti**, Mehrunisa Memon and Kazi Suleman Memon
Sindh Agriculture University, Tandojam, Pakistan
33. **Evaluation of activated phosphorus as a source of P for maize nutrition and growth**
*Waqar Ahmed Chhajro**, Kazi Suleman Memon and Mehrunisa Memon
Sindh Agriculture University, Tandojam, Pakistan
34. **Watershed rehabilitation of D.I. Khan and Tank districts through on farm rain water harvesting techniques**
*Wajid Ali**, Samina Siddiqui, Shabir Shah and Muhammad Usman
National Centre of Excellence in Geology-University of Peshawar
35. **Supplementary irrigation for enhancement of water productivity: A case of economic comparison**
*Obaid ur Rehman**, Muhammad Rashid, Ajmal Khan and Tariq Mehmood
Soil and Water Conservation Research Station, Fateh Jang, Pakistan
36. **Screening of wheat germplasm based on root traits for use in breeding for drought tolerance**
*Amir Raza**, Zahid Ali, Haider Khan, Abdul Jabbar and Wisal Mohammad
Nuclear Institute for Food and Agriculture, Peshawar
37. **Evaluation of loose stone structures for conserving soil moisture and plant nutrients under high rainfall area of Pothwar**
*Adnan Umair**, Rizwan Khalid, H. Abdul Rauf, Kashif Bashir, Muhammad Rashid and Ajmal Khan
Soil and Water Conservation Research Station, Sohawa, Pakistan
38. **Screening of various grasses to provide soil cover and produce biomass (fodder) under high rainfall area of Pothwar**
*Hafiz Abdul Rauf**, Rizwan Khalid, Adnan Umair, Tariq Mahmood and Ajmal Khan
Soil and Water Conservation Research Station, Sohawa, Pakistan

Day-2: 19th March, 2014

Session 2: (09:00 – 12:00)

39. **Impact of cropping patterns and integrated plant nutrient management on microbial properties and soil fertility under rainfed condition**
*Muhammad Rashid**, Mohammad Jamal Khan, Abdus Samad, Shamsheer Ali and Farmanullah Khan
Agricultural Research System, ARS, Serai Naurang, Bannu, Pakistan
40. **Effect of organic and inorganic amendments on specific microbial activity in soil**
*Annum Sattar**, Muhammad Arshad, Muhammad Usman Saleem, Muhammad Rashid Waqas and Azhar Hussain
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
41. **Screening of different tomato germplasms under the agro climatic condition of Mardan (KPK)**
*Amin Khan** and Shamsheer Ali
The University of Agriculture, Peshawar, Pakistan
42. **Evaluating the effect of ethylene on growth, yield, nodulation and early flower induction in mungbean (*Vigna radiata* L.)**
*Muhammad Zahir Aziz**, Azhar Hussain, Zeeshan Hassan, Muhammad Usman Saleem and Hafiz Tanvir Ahmad

Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan

43. **Effect of foliar application of L-MET and L-TRP on early flower induction in cotton (*Gossypium hirsutum* L.)**
*Farah Rasheed**, Azhar Hussain, Hina Nazir, Sadaf Noreen and Hussna Farooq
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
44. **Potential of biosurfactant producing bacteria in reclamation of hydrocarbon polluted soils and combating climate change**
*Aneela Farid** and Azra Yasmin
Department of Environmental Sciences, Fatima Jinnah Women University, the Mall, Rawalpindi, Pakistan
45. **Soil microbial population and enzymes activity affected by different tillage practices in rainfed soil**
*Muhammad Laeeq ur Rehman Hashmi**, Muhammad Akmal, Shahzada Sohail Ijaz and Muhammad Sharif
Department of Soil Science & SWC, PMAS-Arid Agriculture University Rawalpindi, Pakistan
46. **Co-inoculation with rhizobium and azotobacter for improving nodulation and yield of mungbean (*Vigna radiata* L.)**
*Hussnain Ali**, Muhammad Aon, Liaqat Ali, Muhammad Asaad Bashir and Muhammad Khalid
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
47. **Effect of microbially produced auxins on the growth and yield of maize (*Zea mays* L.)**
*Muhammad Faraz Anwar**, Muhammad Asif Iqbal and Muhammad Khalid
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
48. **Impact of gibberellic acid on growth and development of okra (*Abelmoschus esulentus* L.) in cadmium contaminated soil**
*Bushra Batool, Liaqat Ali**, Muhammad Ahmed Akram, Sanaullah Yasin, Muhammad Yahya Khan, Hafiz Naeem Asghar and Zahir Ahmad Zahir
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
49. **Efficacy of phosphate solubilizing rhizobacteria in combination with press mud to enhance phosphorus availability in mash bean**
*Muhammad Taimur Hayat Niazi, Muhammad Ahmed Akram**, Liaqat Ali, Sanaullah Yasin, Muhammad Yahya Khan, Hafiz Naeem Asghar and Zahir Ahmad Zahir
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
50. **Studies on hydrocyanic acid content of different sorghum varieties/lines at different growth stages**
*Muhammad Arfan ul Haq**, Nisar Ahmad, Umar Farooq and Muhammad Azhar
Biochemistry Section, Post-harvest Research Centre, Ayub Agricultural Research Institute, Faisalabad, Pakistan
51. **Response of rice to diazotrophic inoculation along with or without L-tryptophan for reducing nitrogen requirement**
*Muhammad Aon**, Muhammad Khalid, Muhammad Asaad Bashir and Waqas-ud-Din Khan
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
52. **Effect of rhizobium and phosphorus solubilizer inoculation on nodulation and yield of lentil**
*Aneela Riaz*¹, Naseem Akhtar¹, Muhammad Aftab², Muhammad Asif Ali¹, Muhammad Amjad Qureshi¹ and Fakhar Mujeeb¹*
Soil Bacteriology Section Agri. Biotechnology Research Institute, AARI, Faisalabad, Pakistan
53. **Growth promotion potential of *Rhizobium* sp. for improving maize fodder yield**
*Munazza Rafique**, Naseem Akhtar, Aneela Riaz, Muhammad Asif Ali, Muhammad Amjad Qureshi and Fakhar Mujeeb
Soil Bacteriology Section, Agri. Biotechnology Research Institute, AARI, Faisalabad, Pakistan
54. **Combined effect of compost and rhizobium on growth and nodulation of mungbean in normal and saline soils**
*Naseem Akhtar**, Munazza Rafique, Aneela Riaz, Muhammad Asif Ali, Muhammad Amjad Qureshi and Fakhar Mujeeb

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Soil Bacteriology Section, Agri. Biotechnology Research Institute, AARI, Faisalabad, Pakistan

- 55. Quantitative trait loci mapping for popping trait quality in popcorn**
*Hikmat Ullah Jan**, *Jose Marcelo Soriano Viana and R. Odrigo Lima*
Centre of Biological Science and Health, Department of General Biology, Federal University of Vicosa, Minas Gerais, Brazil
- 56. Integrated use of organic, inorganic and PGPR inoculation on the fodder yield of maize and sorghum**
*Muhammad Amjad Qureshi**, *Fakher Mujeeb, Naseem Akhter and Muhammad Asif Ali*
Soil Bacteriology Section, Agri. Biotech. Research Institute, AARI, Faisalabad, Pakistan
- 57. Effect of rhizobium and nitrogen fertilizer on yield of canola (*Brassica napus* L.)**
*Muhammad Asif Ali**, *Muhammad Amjad Qureshi, Fakhar Mujeeb and Naseem Akhtar*
Soil Bacteriology Section, Agri. Biotech. Research Institute, AARI, Faisalabad, Pakistan
- 58. Interactive effect of *Rhizobium* and PGPR inoculation on barseem**
*Liaquat Ali**, *Fakhar Mujeeb, Muhammad Amjad Qureshi, Alamgir Alvi, Muhammad Asif Ali and Naseem Akhtar*
Soil Bacteriology Section, Agri. Biotech. Research Institute, AARI, Faisalabad, Pakistan
- 59. Association of *Azotobacter*, *Bacillus* and *Rhizobium* species for the promotion of cotton**
*Fakhar Mujeeb**, *Muhammad Amjad Qureshi, Muhammad Asif Ali and Naseem Akhtar*
Soil Bacteriology section, Agri. Biotech. Research Institute, AARI, Faisalabad, Pakistan
- 60. Response of wheat to PGPR inoculation with different levels of humic acid**
*M.A. Ali**, *Muhammad Amjad Qureshi, Fakhar Mujeeb, A. Alvi, Naseem Akhtar and L. Ali*
Soil Bacteriology Section, Agri. Biotech. Research Institute, AARI, Faisalabad, Pakistan
- 61. Effect of *Gluconoacetobacter diazotrophicus* on yield and sugar content of sugarcane**
*Alamgir Alvi**, *M. Amjad Qureshi, F. Mujeeb, M. Asif Ali and L. Ali*
Soil Bacteriology Section, Agri. Biotech. Research Institute, Ayub Argiculture Research Institutte, Faisalabad, Pakistan
- 62. Indole butyric acid and substrates influence on multiplication of blackberry cv. Xavante**
*Ibrar Hussain**, *Adriane Marinho de Assis, Lilian Yukari Yamamoto, Renata Koyama and Sérgio Ruffo Roberto*
Universidade Estadual de Londrina, PR, Brazil
- 63. Synergism of seed priming and beneficial microbes for the improvement of wheat yield**
*Arshad Iqbal**, *Alamgir Alvi, Muhammad Amjad Qureshi, Liaquat Ali, Fakhar Mujeeb and Muhammad Asif Ali*
Soil Bacteriology Section, Agri. Biotech. Research Institute, AARI, Faisalabad, Pakistan
- 64. Comparative potential of different microbes for auxin biosynthesis**
*Haroon Shehzad**, *Muhammad Amjad Qureshi, Faakhar Mujeeb, Naseem Akhtar, Muhammad Ilyas, M. Sarfraz and Muhammad Asif Ali*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
- 65. Relative efficiency of *Rhizobium* sp. for auxin biosynthesis**
*Sana Ullah**, *Muhammad Amjad Qureshi, Faakhar Mujeeb, Muhammad Ilyas, Muhammad Sarfra and Muhammad Asif Ali*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
- 66. Rhizogold^{Plus}: A multi-strain biofertilizer for sustainable production of cereals from salt affected soils**
*Muhammad Yahya Khan**, *Zahir Ahmad Zahir, Hafiz Naeem Asghar, Muhammad Usman Jamshaid, Muhammad Naveed, Muhammad Javed Akhtar and Muhammad Arshad*

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- 67. Bioremediation of petroleum contaminated soil to improve soil and plant health**
*Hafiz Naeem Asghar**, Hafiz Muhammad Rafique, Muhammad Yahya Khan, Muhammad Naveed and Zahir Ahmad Zahir
 Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
- 68. Development of a multi-strain biofertilizer “Rhizogold” for sustainable production of pulses on marginal lands of Pakistan**
*Muhammad Usman Jamshaid**, Zahir Ahmad Zahir, Hafiz Naeem Asghar, Muhammad Yahya Khan, Muhammad Naveed, Muhammad Javed Akhtar and Muhammad Arshad
 Soil Microbiology and Biochemistry Lab., Institute of Soil & Environmental Sciences, University of Agriculture, Faisalabad

Day-2: 19th March, 2014

Session 3: (14:00 – 17:00)

- 69. Tillage and nitrogen fertilization effect on soil organic carbon, total nitrogen, soil physical indices and wheat yield**
*Omar Aziz**, Muhammad Iqbal, Haroon Shahzad and Atif Javed
 Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
- 70. Effect of integrated use of varying phosphorus and FYM levels on soil physical health indices and maize yield**
*Haroon Shahzad**, Muhammad Iqbal, Abdul Saboor and Omar Aziz
 Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
- 71. Evaluating the effect of pH on potassium (K) release rate from mica mineral weathering in alkaline solutions at 25 °C**
*Umair Ahmad**, Irshad Bibi, Ghulam Murtaza, Nabeel Khan Niazi, Raja Adil Sarfraz and Muhammad Faheem Ahmad
 Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Faisalabad, Pakistan
- 72. Rationalizing potassium fertilizer recommendations of rice for increasing paddy yield**
*Muhammad Irfan Shahzad**, Muhammad Sabir, Saeed Ahmad and Muhammad Asaad Bashir
 Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
- 73. Phosphorus speciation in the bed sediments by fractionation in a mixed land use catchment in southern Brazil**
*Mohsin Zafar**, Danilo Rheinheimer dos Santos, Tales Tiecher, Marco Antonio Lenz Scotto, Jose Augusto Monteiro de Castro Lima and Christian Schei
 Department of Soil and Environmental Sciences, The University of Poonch Rawalakot, Azad Jammu and Kashmir-Pakistan
- 74. Bioassessment of heavy metal contamination in soil, plants and water of Iqbal town, Faisalabad and mapping through GIS**
*Muhammad Jamshed Zarrar**, Muhammad Zia-ur-Rehman, Hamaad Raza Ahmad and Tasneem Akhtar
 Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad
- 75. Changes in soil organic carbon quality as influenced by organic amendments in a dryland soil**
*Muhammad Rizwan**, Shahzada Sohail Ijaz, Qaiser Hussain, Azeem Khalid, Kashif Bashir and Asma Hassan
 Department of Soil Science & SWC, PMAS-Arid Agriculture University Rawalpindi, Pakistan
- 76. Good Agricultural Practices (GAP) for fodder biomass production on extremely saline Sabkha lands irrigated with treated sewage water**
*A. Osman**, El-Sharief Abdalla, Riaz A. Wahed and Yousef K. Al Khulaifi
 Department of Agricultural Affairs, Ministry of Environment, Doha, Qatar

77. **Response of *Conocarpus erectus* L. to salt-affected field conditions**
*Hafiz Abdul Wahab**, *Muhammad Saqib*, *Javaid Akhtar* and *Ghulam Abbas*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
78. **Organic acid release and oxidative stress tolerance of two acacia species in response to salinity**
*Ghulam Abbas**, *Muhammad Saqib*, *Javaid Akhtar* and *Muhammad Sohail*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
79. **Salt tolerance variations in wheat (*Triticum aestivum* L.) genotypes**
*Muhammad Azhar**, *Muhammad Anwar-ul-Haq*, *Javaid Akhtar*, *Muhammad Zia-ur-Rehman*, *Sajjad Raza*, *Hammad Raza Ahmad*, *Muhammad Sabir* and *Muhammad Shahbaz*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
80. **Seed with biofertilizer coating and salt tolerance in cotton (*Gossypium hirsutum* L.)**
*Muhammad Saqib Rashid**, *Javaid Akhtar*, *Zulfiqar Ahmad Saqib* and *Muhammad Amjad*
Institute of soil and Environmental Sciences, University of Agriculture, Faisalabad
81. **Effect of salinity on the growth and ionic composition of different genotypes of maize (*Zea mays* L.)**
*Muhammad Waqas**, *Muhammad Saqib* and *Muhammad Saleem*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
82. **Response of soybean (*Glycine max* L.) to different concentrations of Hoagland's nutrient solution under salinity stress**
*Tayyaba Samreen**, *Muhammad Anwar-ul-Haq*, *Muhammad Saqib* and *Hassan Munir*
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
83. **Integrated use of compost and fertilizer in saline-sodic soil for wheat**
*Muhammad Sarfraz**, *Muhammad Ilyas*, *Shahzada Munawar Mehdi*, *Abdul Rasool Naseem*, *Muhammad Amjad Qureshi*, *Muhammad Qaisar Nawaz* and *Qaisar Javed*
Soil Salinity Research Institute, Pindi Bhattian, Pakistan
84. **Methods of potassium application in salt affected soil to wheat crop**
*Muhammad Ilyas**, *Muhammad Sarfraz*, *Shahzada Munawar Mehdi*, *Muhammad Amjad Qureshi* and *Qaisar Javed*
Soil Salinity Research Institute, Pindi Bhattian, Pakistan
85. **Introduction of different seed priming techniques in direct seeded rice sown under dry and watter conditions in salt affected soil**
*Muhammad Jamil**, *Syed Saqlain Hussain*, *Shahzada Munawar Mehdi*, *Muhammad Qaisar Nawaz*, *Muhammad Ilyas* and *Qaisar Javed*
Soil Salinity Research Institute, Pindi Bhattian, Pakistan
86. **Integrated use of organic and inorganic amendments for reclamation of salt affected soil**
*Ghulam Qadir**, *Abdul Rehman Jami*, *Khalil Ahmad*, *Muhammad Amjad Qureshi*, *Muhammad Sarfraz*, *Shahzada Munawar Mehdi* and *Qaisar Javed*
Soil Salinity Research Institute, Pindi Bhattian, Pakistan
87. **Screening of rice advance lines against salt tolerance**
*Ghulam Shabbir**, *Shahzada Munawar Mehdi*, *Nadeem-ur-Rehman*, *Muhammad Irfan*, *Muhammad Sarfraz* and *Qaisar Javed*
Soil Salinity Research Institute, Pindi Bhattian, Pakistan
88. **Sesbania (green manure) decomposition enhancement with different tillage techniques in salt affected soil**
*Muhammad Rizwan**, *Jalil Akhtar*, *Muhammad Qaisar Nawaz*, *Shahzada Munawar Mehdi* and *Qaisar Javed*

Soil Salinity Research Institute, Pindi Bhattian

- 89. Effect of different sources of phosphorus fertilizer on growth of *Brassica juncea* under salt stress**
*Badar-uz-Zaman**, Arshad Ali, M. Arshadullah and Imdad Ali Mahmood
Land Resources Research Institute, National Agricultural Research Centre, Islamabad, Pakistan
- 90. Interactive impact of salinity and water stress on the growth and ionic composition of *Jatropha curcas*.**
*Muhammad Mohsin Abrar**, Muhammad Saqib, Javaid Akhtar, Ghulam Abbas, Abdul Wahab and Muhammad Asif
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad, Pakistan
- 91. Impact of textile wastewater applied as irrigation on growth and yield of cotton**
*Asif Ali**, Muhammad Arshad, Azhar Hussain, Muhammad Usman Saleem and Shakeel Ahmad
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
- 92. Effect of textile effluent on growth and yield of wheat**
*Najam-us-Sahar**, Muhammad Arshad, Azhar Hussain, Shakeel Ahmad and Allah Ditta
Institute of soil and Environmental Sciences, University of Agriculture, Faisalabad
- 93. Textile effluent application altered nitrification, microbial and dehydrogenase activities in agricultural soils: A case study of Faisalabad, Pakistan**
*Mahnaz Roohi**, Muhammad Riaz, Muhammad Atif Riaz, Muhammad Saleem Arif, Rabia Parveen, Tahira Yasmeen, Muhammad Rizwan and Sabir Hussain
Department of Environmental Science, Government College University Faisalabad, Pakistan
- 94. Spatial variation of Pb, Ni and Cu in soil, water and plants in different towns of Faisalabad city**
*Qumber Abbas, Muhammad Zia-ur-Rehman**, Saifullah, Muhammad Sabir, Hamaad Raza Ahmed, Muhammad Rizwan and Tasawar Hussain
Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad
- 95. An overview of performance of pesticide quality control laboratory Multan over a decade (2002-03 to 2012-2013)**
*Niaz Ahmed**, Ehsan-ul-Haq Mahmood, Khadim Hussain, Muhammad Akram, Muhammad Nasim, Muhammad and Naeem Akhtar
Pesticide Quality Control Laboratory, Multan
- 96. Spatiotemporal variations of aerosol optical depth (AOD) over Pakistan using satellite imagery**
*Wajeaha Niaz** and Mehr Fatima
Department of Meteorology, COMSATS Institute of Information Technology, Islamabad
- 97. Isolation and screening of efficient bacteria for degradation of reactive black dye**
*Ilyas Ahmad Dasti**, Muhammad Arshad, Farhat Bashir and Hafiz Muhammad Rafique
Institute of Soil and Environmental Science, University of Agriculture Faisalabad
- 98. Bioremediation of petroleum hydrocarbon contaminated soil by indigenous bacteria in association with plant**
*Hafiz Muhammad Rafique**, Hafiz Naeem Asghar, Zahir Ahmad Zahir and Muhammad Shahbaz
Soil and Water Testing Laboratory, Dera Ghazi Khan
- 99. Pollution effects on body mass distributions of freshwater benthic communities**
*Hamida Bibi**, Dave Raffaelli, M. Jamal Khan and Muhammad Afzal
University of York, UK
- 100. Characterization of ground water quality for irrigation in tehsil and district Layyah, Punjab Pakistan**

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Muhammad Ashraf, Muhammad Nasir, Muhammad Bilal Khan and Farah Umar*
Soil and Water Testing Laboratory, Layyah, Pakistan

101. Cadmium and lead contents in rice grown across the highways and with sewage water

Tahir Majeed, Atif Muhmood, Shahid Javid, Riaz Ahmad Sial, Abdul Majeed and Syed Shahid Hussain Shah*
Chemistry Section, Institute of Soil Chemistry and Environmental Sciences, Ayub Agricultural Research Institute, Faisalabad, Pakistan

102. Bioavailability of arsenic to *Zea mays* L. grown in contaminated soils with contrasting textures: Effect of compost application

Tariq Mehmood, Nabeel Khan Niazi, Irshad Bibi, Muhammad Farrukh Nawaz, Ghulam Murtaza and Hafiz Naeem Asghar*
Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad, Pakistan