

DR. AMIR RAZA

Principal Scientist

Group Leader, Soil and Environmental Sciences Division
Nuclear Institute for Food & Agriculture, Peshawar, Pakistan

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“Hard working, innovative researcher, striving for solutions, ready to take up any challenge”

Qualification:

Ph.D. 2011
University of Natural Resources and Life Sciences, Vienna, Austria

M.Sc. (Hons.) Agric. 1999

B.Sc. (Hons.) Agric. 1997
University of Arid Agriculture, Rawalpindi, Pakistan

Career History:

Nuclear Institute of Food & Agriculture, Peshawar, Pakistan

Principal Scientist
Dec 2015 to Present
Senior Scientist
Aug 2012 to Nov 2015

Nuclear Institute of Agriculture, Tando Jam, Pakistan

Senior Scientist
Dec 2003 to July 2012
Scientific Officer
May 2001 to Nov 2003

Summary:

I am an experienced researcher having 17 years of research for development experience in a public sector organization. I am expert user of simulation model, CropSyst. I can handle simulation models for analyzing impact of climate change, plant traits and management interventions on crop productivity. I have over 5 years of experience in farm business management.

I am resource person on water use efficiency for sustainable agriculture. I am a good writer, reviewer, editor, presenter and organizer. I hold several academic distinctions including gold medal.

Achievements:

- Member of group that evolved three high yielding and rust resistant wheat varieties using farmer participatory approach
- Received honorarium in recognition to dedicated work for farm management from Head of Organization
- Authored peer reviewed journal articles (16), book chapters (4), book (1), four (5) popular articles and one (1) brochure
- Thirty (30) contributions in national and international conferences in the form of abstracts/posters/papers
- Reviewer of twelve (12) peer reviewed journals
- Listed in Directory of Productive Scientists of Pakistan since 2012

Skills:

- Advance user of simulation model, Cropsyst and other models
- Application of carbon and nitrogen isotopes for water and nitrogen use efficiency studies under field conditions
- Analytical skills for use in soil fertility and soil physics laboratory
- Field agronomist for wheat (extension services) and lucerne
- Seed production and certification specialist
- Farm business management for enhancing profitability
- Know how on certified organic farming practices from Austria
- Synthesis of technical information for developing review papers
- Writing of technical proposals for grants
- Trained in government establishment and procurement rules
- Advance user of statistical software, SPSS
- Advance user of MS-Office
- Development of training materials and brochures
- Organizer of scientific events and seminars
- Strong interpersonal and communication skills
- Flexible team player and willing to relocate
- Management experience in leading a scientific group

Interests:

- 1- Use of experimental and modeling approaches for raising productivity of wheat based cropping systems under climate change
- 2- Development and popularization of organic fertilizer products (compost & compost tea)

Trainings:

Human Resource Management in Public Sector
9-12 Aug, 2016
PPMI, Islamabad, Pakistan

4Q Training Course-II
8-19 June, 2015
CHASCENT, Kundian, Pakistan

Writing Technical Proposals for Grants
27-31 Oct, 2014
NARC, Islamabad, Pakistan

4Q Training Course-I
21 April-2 May, 2014
NIFA, Peshawar, Pakistan

CropSyst Training Course
16-20 July, 2007
ZEF, Bonn, Germany

Memberships:

International Society of Root Research, United Kingdom
Sep 2011 to Present

Academic Distinctions:

- Passed Ph.D. with Distinction (Jan 2011)
- First position in agronomy department during M.Sc. (1999)
- Gold medalist in graduation (1997)

Research Experiences

Highlights:

- Seventeen (17) years' experience in agronomy, farm management, soil science and wheat breeding in a public sector R4D organization in a developing country (Pakistan) with focus on development and transfer of technology to end users
- Seven (7) years of post doc research experience in wheat improvement for water limited environments using experimental and modeling approaches
- Five (5) years of experience as farm manager at experimental farm
- Three (3) year experience as leader of scientific group

Dissertation Titles:

- Ph.D.- Water relations of lucerne (*Medicago sativa* L.) under organic farming conditions
- M.Sc. (Hons.)- Influence of L-tryptophan on the growth of Sunflower (*Helianthus annuus* L.)
- B.Sc (Hons.)- Weed smothering by rabi/winter crops

Group Leader- Soil Biology & Biochemistry Group (Since Jan 2015)

- Strengthening of research for development activities through designing and executing new experiments
- Developing research linkages and collaboration to attract funds
- Supervision of assignments of scientists and staff

Research Collaborations:

- Institute of Agronomy and Plant Breeding, Department of Applied Plant Sciences and Plant Biotechnology, University of Natural Resources and Life Sciences, Vienna, Austria
- Center for Climate Research and Development, COMSATS Institute of Information Technology, Islamabad, Pakistan
- Pakistan Academy for Rural Development, Peshawar, Pakistan

Research/Extension Funding:

- 1- A grant worth PKR 4.9 million was awarded by Pakistan Science Foundation (PSF) and Turkish Cooperation and Coordination Agency, Islamabad for "Pilot Scale Demonstration and Popularization of Dual Technology of Bio-Geyser with Agro-Waste Composting" (2016-2017).
- 2- Won a grant of PKR 2.74 million from PSF (as Co PI) on "Pilot Scale Production and Popularization of Compost Tea as Organic Fertilizer Nutrient Source" (2018-2020)

Carbon Expert- Consultancy and Analytical Services :

Provided consultancy/analytical services to World Wildlife Fund, Pakistan for the estimation of carbon contents in soil and plants and determination of bulk density under a World Bank funded project "Develop FREL/FRL and National Forest Monitoring System-Measurement, Reporting and Verification System for REDD+" (2017-2018).

Research Assignments:

Identification of plant traits and management interventions for sustainable wheat production under climate change (2012-2018)

Experimental and modeling approaches are being used to identify plant traits that shall be targeted for wheat yield enhancement under water limited conditions in Khyber Pakhtunkhwa province of Pakistan. Data from field experiments is being used to calibrate and validate the

Reviewer of Journals:

Journal of Agronomy
Research (Online), USA
May 2018 to Present

Turkish Journal of Biology,
Turkey
August 2017 to Present

Journal of Agricultural
Sciences and Food
Technology (Online)
Oct 2015 to Present

Science, Technology and
Development Journal,
Islamabad, Pakistan
Sep 2015 to Present

Sustainable Agriculture
Research, Canada
Nov 2014 to Present

Agricultural Sciences, USA
Sep 2014 to Present

Climate Research, Germany
Aug 2014 to Present

International Journal of
Biology, Canada
Aug 2014 to Present

Journal of Arid Land, China
May 2014 to Present

Journal of Agricultural and
Crop Research, Nigeria,
Africa
June 2012 to Present

Journal of Agricultural
Sciences, Canada
Mar 2012 to Present

Journal of Agricultural and
Biological Sciences (online)
Dec 2011 to Present

Technical Reviewer:

Research
Projects/Publications
Evaluation Committee

simulation model CropSyst. Scenario analysis is being extended to study wheat response to changing climate and devise appropriate mitigation strategies for sustaining wheat productivity.

Feasibility of enrichment of compost for nitrogen content and improvement of Bio-Geyser (2012-2018)

Feasibility studies on enrichment of compost for nitrogen content are in progress to identify suitable agro-wastes. Protocol for preparation of compost tea from compost is in the process of standardization. Evaluation of compost and compost tea along with inorganic fertilizers for improving yield of vegetables is carried out under field conditions. Heat generated naturally during composting of residues is being used sustainably by developing Bio-Geyser technology for heating water. Efforts are in progress to further improve design and efficiency of Bio-Geyser. Extension services are a regular feature of our group to popularize dual technology of compost and Bio-Geyser so that end-users can learn and adopt the technology. Twenty five (25) bio-geysers have been fabricated and demonstrated at community level in Hazara Division and Swat district under a grant from Pakistan Science Foundation and Turkish Cooperation and Coordination Agency, Islamabad, Pakistan. A one day training workshop on dual technology was organized for end-users in the districts of Mansehra and Swat.

Water relations of lucerne under organic farming conditions (2007-2011) - Ph.D. thesis

Experimental and modeling approaches were used to identify lucerne genotypes and utilization systems for enhancing water use efficiency and crop productivity under semi-arid conditions in eastern Austria. Water balance approach was used to quantify water use efficiency. Core method of root sampling was used to collect roots for assessing the differences among genotypes. Root traits were studied using WinRhizo software for further use as data input to the simulation model making the study innovative as measured data on root traits is rarely used in the simulations of water uptake.

Simulation model, CropSyst was applied to analyze the impact of plant traits and management interventions on components of water balance and hypothesize an ideotype for water limited conditions in Austria. Field experiments were also conducted to study effect of mulching with lucerne on yield, water use efficiency and biological nitrogen fixation. ¹⁵N isotopic dilution method was used to assess nitrogen fixation. Inter disciplinary research was carried out in the project involving agronomy, soil chemistry, soil physics, mass spectrometry, meteorology and root morphology.

Data was analyzed using SPSS and published (3 articles in peer reviewed journals and 1 book chapter) besides presenting 4 abstracts/posters in conferences.

Transfer of disease resistance in bread wheat (2011-2012, 2001-2006)

Extensive screening of germplasm (local and exotic from collaborators viz. ICARDA, CIMMYT, etc.) was carried out for biotic (leaf rust and stem rust) and abiotic stresses (water and heat) under field and glass house

NIFA, Pakistan
March 2018- Present

Climate Vulnerability
Reduction Framework
Review Expert Group
High Ground Foundation, UK
Feb-Aug 2017

National Research Program
for Universities
Higher Education
Commission, Islamabad,
Pakistan
2015-2016

Monograph and Textbook
Writing Scheme
Higher Education
Commission, Islamabad,
Pakistan
2016

Organization of Science Events:

Training Workshop on Dual
Technology of Bio-Geyser
and Agro-waste Composting
May 19, 2017
Mansehra, Pakistan
Sep 28, 2017
Swat, Pakistan

National Workshop on Wheat
Rusts
April 11-12, 2011
NIA, Tando Jam, Pakistan

Course on Genetic
Improvement of Crop Plants
May 9-13, 2011
NIA, Tando Jam, Pakistan

Scientific Evaluator:

Member of team for
evaluation of Agronomy
Department, Sindh
Agricultural University, Tando
Jam, Sindh, Pakistan

conditions to identify suitable parents for development of high yielding and rust tolerant wheat varieties. Advance lines were tested in a series of on farm yield trials before testing the material at farmer's field. A package of production technology was developed for promising entries before their release as variety at national level. Project released three varieties as a result of team work. Higher standards of seed purity were achieved by raising single spike and single row progenies.

Data was published in national journals and presented at conferences. Promotion of ongoing research activities was carried out by organizing farmers days and field days.

Farm management (2001-2006)

An experimental farm of 65 hectares was efficiently managed for multi-purpose activities of field experimentation, seed production, orchard management and income generation using available resources. Improved lay out of farm lands for enhancing water use efficiency and reclamation of saline lands were the key interventions introduced. Special focus was given to streamline the strategy for wheat seed production under the guideline of federal seed certification department and higher purity was assured by adopting technical guidelines right from sowing till processing and marketing.

Administrative assignments included supervision of farm staff (100 members), record keeping as per farm procedures of the organization, preparation of farm budgets and periodical reports on farm activities, procurement of farm related inputs and machinery and assistance in organizing field /farmers days and training workshops on regular basis.

Farmers participatory saline agriculture development project (2002)

Assisted in preliminary surveys for site selection and soil sampling before introducing suitable interventions on saline lands for their economic utilization and provided technical support for raising nursery of salt tolerant tree species and transplantation to field sites. Worked as a team member to set up an office at project site for smooth functioning of project activities.

Publications (Impact factor: 10)

Google Scholar Citation Profile (Last retrieved on Nov 19, 2018)

Citation/ Indices	All	Since 2013
Citations	115	108
h-index	6	6
i 10-index	5	5

No.	Peer reviewed articles/Book chapters/Book	Place of Publication
21	Organic Agriculture for Food Security in Pakistan Raza A. , Asad S., Mohammad W. In: Lichfouse, Eric (Ed.), pp. 25 <i>Waste Recycling and Fertilization, Sustainable Agriculture Reviews</i> 32, Springer International Publishing (2018)	SWITZERLAND
20	Genotypic variation in zinc efficiency of wheat genotypes under culture solution and field conditions Imtiaz M., Khan P., Raza A. , Mohammad W. Pak. J. Agri., Agril. Engg. Vet. Sci. 33 (2): 177-193 (2017)	PAKISTAN
19	Identification of nitrogen use efficient and deep rooted wheat genotypes Raza A. , Ali Z., Imtiaz M., Mohammad W. Pak. J. Agri., Agril. Engg. Vet. Sci. 32 (1): 1-8 (2016)	PAKISTAN
18	Biological nitrogen fixation and biomass production stability in alfalfa (Medicago sativa L.) genotypes under organic management conditions Moghaddam A., Raza A. , Vollmann J., Ardakani M.R., Wanek W., Gollner G., Friedel J.K. Biol. Agric. Hort. 31 (3): 177-192 (2015) (IF 0.765)	UNITED KINGDOM
17	Wheat root selections for sustainable production Raza A. , Imtiaz M., Mohammad W. In: Lichfouse, Eric (Ed.), pp. 295-315. <i>Sustainable Agriculture Reviews</i> 18, Springer International Publishing (2015)	SWITZERLAND
16	Evaluation of CropSyst for studying the effect of mulching with Lucerne (Medicago sativa L.) in Vienna, Austria Raza A. , Moghaddam A., Gollner G., Friedel J.K. J. Plant Interact. 9 (1):592-598 (2014) (IF 1.191)	UNITED KINGDOM
15	Assessing the effect of Lucerne utilization systems in the Pannonian region of Austria Raza A. , Bodner G., Moghaddam A., Ardakani M.R., Loiskandl W., Himmelbauer M., Gollner G., Wanek W., Friedel J.K. Arch. Agron. Soil Sci. 60 (3): 297-311 (2014) (IF 1.118)	UNITED KINGDOM
14	Identification of traits for lucerne ideotype under organic farming conditions Raza A. , Moghaddam A., Loiskandl W., Himmelbauer M., Gollner G., Friedel J.K.. Int. J. Agric. Sci. Res. 3 (6):99-111 (2014) (IF 0.5833)	USA & NIGERIA
13	Root research for sustainable use of natural resources: a review Raza A. , Imtiaz M., Mohammad W. J. Sci. Res. Rev. 3 (1):1-7 (2014)	ONLINE
12	<i>Agricultural Systems in the 21st Century</i> Raza A. (ed.) Nova Science Publishers, Inc. New York, Pp.278 (2013)	USA
11	Micronutrients for Improving Soil and Human Health Imtiaz M., Muhammad W., Khan P., Raza A. In: Raza A. (Ed.), Pp.131-168. <i>Agricultural Systems in the 21st Century</i> Nova Science Publishers, Inc. New York (2013)	USA
10	Carbon isotope discrimination and water use efficiency relationships of alfalfa genotypes under irrigated and rain-fed organic farming Moghaddam A., Raza A. , Vollmann J., Ardakani M.R., Wanek W., Gollner G., Friedel J.K. Eur. J. Agron. 50: 82-89 (2013) (IF 3.186)	NETHERLANDS
9	Modeling growth of different lucerne cultivars and their effect on soil water dynamics Raza A. , Friedel J.K., Moghaddam A., Ardakani M.R., Loiskandl W., Himmelbauer M., Bodner G. Agric. Water Manage. 119: 100-110 (2013) (IF 2.603)	NETHERLANDS
8	Increasing water use efficiency for sustainable agriculture Raza A. , Friedel J.K., Bodner G. In: E. Lichtfouse (ed.) Agroecology and Strategies for Climate Change, <i>Sustainable Agriculture Reviews</i> 8, pp.167-211. Springer International Publishing (2012)	SWITZERLAND

7	Suitability of Drought Tolerance Indices for Selection of Alfalfa (<i>Medicago sativa</i> L.) Genotypes under Organic Farming in Austria Moghaddam A., Vollmann J., Wanek W., Ardakani M.R., Raza A. , Pietsch G., Friedel J. K. <i>Crop Breeding J.</i> 2(2): 79-89 (2012)	IRAN
6	Improving water use efficiency for wheat production in Pakistan Raza A. , Khanzada S.D., Ahmad S., Afzal M. <i>Pak. J. Agri., Agril. Engg. Vet. Sci.</i> 28 (1): 27-39 (2012)	PAKISTAN
5	Release of Chonte # 1 in Afghanistan: Future Threat to Sustainable Wheat Production in the Region Khanzada S.D., Raza A. , Ahmad S., Korejo I., Imran Z. <i>Pak. J. Phytopath.</i> 24 (1): 82-84 (2012)	PAKISTAN
4	Genetic diversity and distance among Iranian and European alfalfa genotypes Moghaddam A., Pietsch G., Ardakani M.R., Raza A. , Vollmann J., Friedel J. K. <i>Crop Breeding J.</i> 1(1): 13-28 (2011)	IRAN
3	Response of Root Properties to Tripartite Symbiosis between Lucerne, Rhizobia and Mycorrhiza Under Dry Organic Farming Conditions Ardakani M.R., Pietsch G., Moghaddam A., Raza A. , Friedel J. K. <i>Am. J. Agric. Biol. Sci.</i> 4 (4): 266-277 (2009)	USA
2	Evaluation of Mycorrhizae Symbiosis Efficiency with Barley through ³² P uptake under Soils Contaminated with Heavy Metals Ardakani M.R., Teimuri S., Rezvani M., Fatollahi H., Khorasani A., Rejali F., Raza A. , Zafarian F. <i>Int. J. Bot.</i> 5 (3): 236-243 (2009)	PAKISTAN
1	Effect of L-Tryptophan on the growth of sunflower Raza A. , Ahmed S., Mehmood T., Imtiaz M. <i>Soil Environ.</i> 24(1):23-26 (2005)	PAKISTAN
No	Magazine Articles/Brochures	Place of Publication
5	Preparing Compost from Agro-wastes (In Urdu) Ali Z., Raza A. <i>Zaraat Naama</i> , Khyber Pakhtunkhwa. Pp.25-29. (Sep-Oct, 2017)	PAKISTAN
4	Dual technology of agro-waste composting and bio-geyser (in Urdu) Raza A. , Ali Z. Pp. 8 (2016)	PAKISTAN
3	Impact of climate change on agricultural productivity Laghari K.A., Sial M.A., Arain M.A., Raza A. <i>Farming Outlook.</i> 11 (1): 24-27 (2012)	PAKISTAN
2	Mango die back and its management Raza A. , Ismail M., Afzal M., Khanzada S.D. <i>Farming Outlook.</i> 10 (3):16-19 (2011)	PAKISTAN
1	Water crisis and strategies for wheat production Raza A. , Rashid A., Naqvi M.H., Asif M. <i>Farming Outlook.</i> 5(3):19-22 (2006)	PAKISTAN
Papers Published in Conference Proceedings		
6	Biological nitrogen fixation and growth parameters correlations of alfalfa genotypes under organically managed fields with limited irrigation Moghaddam A., Raza A. , Vollmann J., Ardakani M.R., Wanek W., Gollner G., Friedel J.K. <i>4th ISOFAR Scientific Conference. Building Organic Bridges</i> Rahman G. and Aksoy U. (Eds.), Pp. 687-690, 13-15 Oct, Istanbul (2014)	TURKEY
5	Root biomass of 18 alfalfa (<i>Medicago sativa</i> L.) varieties in two different environments under organic management Moghaddam A., Pietsch G., Raza A. , Vollmann J., Friedel J.K. In: Institute of Hydraulics and Rural Water Management, Department of Water, Atmosphere and Environment, University of Natural Resources and Applied Life	AUSTRIA

	Sciences, Vienna (Hrsg.) Himmelbauer M L, Loiskandl W, (Eds.), Short Paper Abstracts, 14-5 (Short Paper on CD, SESSION 5) PUBLIZIERTER Beitrag für wissenschaftliche Veranstaltung 7th ISRR Symposium on Root Research and Applications (RootRAP) (2009)	
4	Effect of co-inoculation with rhizobia and mycorrhiza on root parameters of lucerne (Medicago sativa L.) under dry organic farming conditions Ardakani M.R., Pietsch G., Friedel J.K., Schweiger P., Moghaddam A., Raza A. In: Institute of Hydraulics and Rural Water Management, Department of Water, Atmosphere and Environment, University of Natural Resources and Applied Life Sciences, Vienna (Hrsg.) Himmelbauer M L, Loiskandl W, (Eds.), Short Paper Abstracts 13-1. 7th ISRR Symposium 'Root Research and Applications' (RootRAP) (2009)	AUSTRIA
3	Root area index of lucerne affected by rhizobia and mycorrhiza under dry organic farming conditions Ardakani M.R., Friedel J.K., Pietsch G., Schweiger P., Moghaddam A., Raza A. In: Institute of Hydraulics and Rural Water Management, Department of Water, Atmosphere and Environment, University of Natural Resources and Applied Life Sciences, Vienna (Hrsg.) Himmelbauer M L, Loiskandl W, (Eds.), Short Paper Abstracts, 12-3 (Short Paper on CD, SESSION 3) 7th ISRR Symposium 'Root Research and Applications' (RootRAP) (2009)	AUSTRIA
2	Root sampling and analysis in lucerne (Medicago sativa L.) field trial Raza A. , Pietsch G., Moghaddam A., Loiskandl W., Himmelbauer M., Ardakani M. R., Friedel J. K. In: Institute of Hydraulics and Rural Water Management, Department of Water, Atmosphere and Environment, University of Natural Resources and Applied Life Sciences, Vienna (Hrsg.) Himmelbauer M L, Loiskandl W, (Eds.), Short Paper Abstracts, 23-7 (Short Paper on CD, SESSION 7) 7th ISRR Symposium 'Root Research and Applications' (RootRAP) (2009)	AUSTRIA
1	Effectiveness of Yellow Rust Resistance Genes in Pakistani Wheat Khanzada S.D., Rashid A., Naser M., Rattu A. R., Raza A. 2nd Regional Yellow Rust Conference 22-26 March, National Agriculture Research Council, Islamabad. pp.102-112 (2004)	PAKISTAN
Oral Presentations and Abstracts		Dates & Country
11	Studying Wheat Water and Nutrient Uptake in Conjunction with Root Traits Raza A. , Ali Z. 17th international Congress of Soil Science, Soil: Ultimate Solution to Food Security and Climate Change Serena Hotel, Faisalabad	13-15 March, 2018 PAKISTAN
10	Water Related Vulnerability of Agriculture Sector to Climate Change in Pakistan Raza A. Symposium on The Vulnerability of Pakistan's Water Sector to the Impacts of Climate Change: Identification of gaps and recommendations for action Serena Hotel, Islamabad. Pp.13.	31 May, 2016 PAKISTAN
9	Genotypic Variation in Zinc Efficiency (ZE) of Wheat Genotypes under Culture Solution and Field Conditions Imtiaz M., Khan P., Mohammad W., Raza A. 16th International Congress of Soil Science: Health Soils for Food Security PMAS, University of Arid Agriculture, Rawalpindi. pp. 40.	15-17 March 2016 PAKISTAN
8	Cold Shock and Its Damage to Different Crops Khanzada S.D., Raza A. , Ahmad S., Korejo I., Sheikh N., Nizamani N., Imran Z.	11-13 July, 2012 PAKISTAN

	<i>International Science Conference on Agriculture and Food Security Issues in Global Environmental Perspectives</i> Faculty of Agriculture, The University of Poonch, Rawlakot , Azad Jammu And Kashmir. Pp.164	
7	Development of New Ideotypes of Bread Wheat Khanzada S.D., Raza A. , Ahmad S., Korejo I., Sheikh N., Imran Z. <i>International Science Conference on Agriculture and Food Security Issues in Global Environmental Perspectives</i> Faculty of Agriculture, The University of Poonch, Rawlakot, Azad Jammu And Kashmir. Pp.175	11-13 July, 2012 PAKISTAN
6	Effects of Terminal Temperature on Different Economic Traits of Bread Wheat Ahmad S., Khanzada S.D., Raza A. , Korejo I., Sheikh N., Imran Z. <i>International Science Conference on Agriculture and Food Security Issues in Global Environmental Perspectives</i> Faculty of Agriculture, The University of Poonch, Rawlakot, Azad Jammu And Kashmir. Pp.207	11-13 July, 2012 PAKISTAN
5	Two New Challenges for Sustainable Wheat Production in Sindh due to Climate Change Khanzada S.D., Raza A. , Ahmad S., Korejo I., Sheikh N., Nizamani N., Imran Z. <i>International Conference on Climate Change: Opportunities and Challenges</i> National University of Science & Technology, Islamabad. Pp. 59-60.	9-11 May, 2012 PAKISTAN
4	Release of Chonte # 1 in Afghanistan: Future Threat to Sustainable Wheat Production in the Region Khanzada S.D., Raza A. , Ahmad S., Korejo I., Imran Z. <i>8th National Conference of Pakistan Phytopathological Society: Challenges and Options for Plant Health Management</i> Faisalabad. pp.103	28-29 Nov, 2011 PAKISTAN
3	Increasing Water Use Efficiency for Sustainable Wheat Production Raza A. , Khanzada S.D., Ahmad S., Korejo I., Imran Z. <i>International Science Conference on Prospects and Challenges to Sustainable Agriculture</i> Faculty of Agriculture, Rawlakot, The University of Azad Jammu and Kashmir. pp. 45	14-16 July, 2011 PAKISTAN
2	Pyramiding of Rust Resistant Genes in Bread Wheat Ahmad S., Raza A. , Khanzada S.D., Korejo I., Imran Z. <i>International Science Conference on Prospects and Challenges to Sustainable Agriculture</i> Faculty of Agriculture, Rawlakot, The University of Azad Jammu and Kashmir. pp. 330.	14-16 July, 2011 PAKISTAN
1	Strategies for Sustainable Wheat Production in Pakistan Khanzada S.D., Raza A. , Ahmad S., Korejo I., Imran Z. <i>International Science Conference on Prospects and Challenges to Sustainable Agriculture</i> Faculty of Agriculture, Rawlakot, The University of Azad Jammu and Kashmir. pp. 329.	14-16 July, 2011 PAKISTAN
Poster Presentation and Abstracts		
13	Water Related Vulnerability of Agriculture Sector to Climate Change in Pakistan Raza A. , Mohammad W. <i>National Conference on Agricultural Problems and Food Security in the Changing Climate</i> University of Agriculture, Peshawar.	14-18 Nov, 2018 PAKISTAN

12	Response of Potato to Combined Application of Compost Tea and Inorganic Fertilizers Ali, Z., Raza A. 17th international Congress of Soil Science, Soil: Ultimate Solution to Food Security and Climate Change Serena Hotel, Faisalabad	13-15 March, 2018 PAKISTAN
11	Development and Popularization of Environment Friendly Dual Technology of Composting and Bio-Geyser Raza A. , Ali Z., Mohammad W. National Conference on Challenges and Opportunities to Boost Agriculture in Changing Climate College of Agriculture, BZU, Bahadur Sub Campus, Layyah. Pp.259.	29-30 March 2017 PAKISTAN
10	Effective Utilization of Agro-wastes for Partly Combating Energy Crisis in Khyber Pakhtunkhwa Raza A. , Zahid A. 16th International Congress of Soil Science: Health Soils for Food Security PMAS, University of Arid Agriculture, Rawalpindi. pp. 252.	15-17 March 2016 PAKISTAN
9	Response of Potato to Foliar Application of Fulvic Acid Ali Z., Raza A. , Haroon 16th International Congress of Soil Science: Health Soils for Food Security PMAS, University of Arid Agriculture, Rawalpindi. pp. 158-159.	15-17 March 2016 PAKISTAN
8	Screening of wheat germplasm based on root traits for use in breeding for drought tolerance Raza A. , Ali Z., Khan H., Jabbar A., Mohammad W. 15th International Conference of Soil Science National Agricultural Research Center, Islamabad. Pp.215.	18-20 March, 2014 PAKISTAN
7	Effect of compost on the growth of wheat and chickpea Ali Z., Khan H., Raza A. 15th International Conference of Soil Science National Agricultural Research Center, Islamabad. Pp. 201.	18-20 March, 2014 PAKISTAN
6	Water Economics and biomass production of alfalfa under organic growing conditions in Eastern Austria Schweinzer A., Gollner G., Moghaddam A., Raza A. , Friedel J.K. Research and education on organic farming at BOKU In: Organic Farming, 2012 Design (In German Language) University of Natural Resources and Life Sciences, Vienna	18 Oct, 2012 AUSTRIA
5	Effectiveness of Stem Rust Resistant Genes Against a New Pgt Race Virulent on Wheat cv. Kiran in South Pakistan Imran Z., Baloch G.M., Shahnawaz M.S., Siyal M.A., Khanzada S.D., Ahmad S., Raza A. BGRI Technical Workshop Beijing. Pp. 125.	1-4 Sep, 2012 CHINA
4	Significance of Root Traits in Wheat Breeding Raza A. , Khanzada S.D., Ahmad S., Korejo I., Sheikh N., Imran Z. International Science Conference on Agriculture and Food Security Issues in Global Environmental Perspectives Faculty of Agriculture, The University of Poonch, Rawlakot, Azad Jammu And Kashmir. Pp.204.	11-13 July, 2012 PAKISTAN
3	Comparison of lucerne root characteristics under irrigated and rain-fed conditions Raza A. , Friedel J. K., Moghaddam A., Ardakani M. R., Loiskandl W., Himmelbauer M., Bodner G. In: Bengough, G., White, P. and Gregory, P. Pp.49.	26-29 June, 2012 UNITED KINGDOM

	8th symposium of the International Society of Root Research: Roots to the Future University of Dundee, Scotland.	
2	Root characteristics of lucerne under rain-fed conditions Raza A. , Friedel J. K., Moghaddam A., Ardakani M. R., Loiskandl W., Himmelbauer M., Bodner G. In: Bengough, G., White, P. and Gregory, P. Pp.56. 8th symposium of the International Society of Root Research: Roots to the Future University of Dundee, Scotland.	26-29 June, 2012 UNITED KINGDOM
1	Root characters of lucerne under rain-fed and irrigated conditions Raza A. , Moghaddam A., Loiskandl W., Friedel J K., Himmelbauer M., Bodner G. In: European Geosciences Union, Geophysical Research Abstracts Vol. 12, EGU2010-9608. European Geosciences Union General Assembly Austria Center, Vienna	May 2-7, 2010 AUSTRIA
Participation in Workshops/Fair		Dates & Country
6	Parthenium Weed Management Action Plan- Stakeholder Review Workshop Venue: Ramada Hotel, Islamabad Organizers: CABI (Central & West Asia), Rawalpindi	Oct 8-9, 2018 PAKISTAN
5	International Workshop on Sustainable Food Systems under Climate Change in South Asia Venue: Serena Hotel, Islamabad Organizers: Potsdam Institute for Climate Impact Research (PIK), Germany & Center for Climate Research and Development (CCRD), COMSATS University	June 26-28, 2018 PAKISTAN
4	National Workshop on Organic Food and Health: Avenues of Innovation and Entrepreneurship Venue: University of Engineering and Technology, Peshawar Organizers: Pakistan Council for Science and Technology, Islamabad	30 Nov, 2017 PAKISTAN
3	Groundwater Assessment Platform Workshop Venue: COMSATS Institute of Information Technology, Islamabad Organizers: COMSATS & Swiss Federal Institute of Aquatic Science and Technology	10 Feb, 2017 PAKISTAN
2	National Science Fair Venue: Pakistan Museum of Natural History, Islamabad Organizers: Federal Ministry of Science & Technology, Pakistan Science Foundation, Pakistan Museum of Natural History	2-7 Dec, 2016 PAKISTAN
1	National Workshop on Innovations in Irrigation Water Management for Enhancing Productivity and Achieving Sustainable Food Security Venue: University of Arid Agriculture, Rawalpindi Organizers: National Productivity Organization, Pakistan and Asian Productivity Organization, Japan.	2-5 June, 2014 PAKISTAN
Supervision of Master's Thesis		
2	Effect of Compost and Vermi-compost Applied With Chemical Fertilizers on the Yield and Nutrient Uptake of Okra by Shehryar, Student M.Sc. (Hons.) Agric., Department of Soil and Environmental Sciences, University of Agriculture, Peshawar, Pakistan. 2017.	
1	Identification of Deep Rooted and Resource Use Efficient Wheat Genotypes by Asad Ullah Khan, Student M.Sc. (Hons.) Agric., Department of Soil and Environmental Sciences, University of Agriculture, Peshawar, Pakistan. 2016.	
Online Courses		

3	Literature and Mental Health (Oct 30- Dec 8, 2017) www.futurelearn.com	The University of Warwick United Kingdom
2	Water Scarcity: Crisis and Response (9-28 Oct, 2017) www.futurelearn.com	Colorado State University USA
1	The Future of Farming (Aug 28- Sep 15, 2017) www.futurelearn.com	University of Reading United Kingdom
References can be made available on request		