

Résumé

Dr. Shabir Hussain

Presently: Associate Professor, Department of Agronomy
Bahauddin Zakariya University, Multan, Pakistan
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Qualifications:

Post-Doc. 2019. ***Bahauddin Zakariya University, Multan, Pakistan***
Thesis Title: Impact of climate change on yield of major food crops in Pakistan.

Ph.D. 2013. ***University of Agriculture, Faisalabad, Pakistan***
Thesis Title: Impact of polyamines and nitrogen application on the water economy of hybrid maize (*Zea mays L.*).

M.Sc. (Hons.) Agri. 2007. ***University of Agriculture Faisalabad, Pakistan*** **(1st Div.)**
Thesis Title: Modeling the Growth Development and Radiation Use Efficiency of Wheat (*Triticum aestivum* L.) under Different Irrigation and Fertilizer Levels.

B.Sc. (Hons.) Agri. 2005. ***Department of Agronomy, University of Agriculture, Faisalabad, Pakistan*** **(1st Div.)**

Areas of Specialization:

Stress Agronomy/Stress Physiology/Agriculture

Distinctions and Awards:

i. Indigenous PhD Scholarship funded by Higher Education Commission (HEC), Islamabad, Pakistan (2007-13)
ii. First division throughout the career.
iii. Merit scholarship holder in Elementary, Secondary as well as Higher Secondary exams.
iv. Indigenous Post-Doctoral Fellowship funded by Punjab Higher Education Commission (PHEC), Lahore, Pakistan (2018-19)
v. One performance based increment for the year 2018
vi. One performance based increment for the year 2019
vii. One performance based increment for the year 2020
viii. One performance based increment for the year 2021
ix. HEC accredited Supervisor since 2021
x. Grant of extension for three years in TTS period, (02-07-2018 to 01-07-2021)

Teaching Experience:

i. Associate Professor (Tenured), Department of Agronomy, BZ University of Multan (16-01-2021 to date)
ii. Assistant Professor(TTS), Department of Agronomy, BZ University of Multan (02.07.2015 to 15-01-2021)
iii. Assistant Professor (IPFP), Department of Agronomy, BZ University of Multan (20.01.2014 to 19-01-2015)

Non-Teaching Experience:

i. 4 months experience of internship at Adaptive Research Farm, Gujranwala (01-03-2005 to 30-06-2005).
ii. 1 year experience working as Research officer in the project entitled "Use of allelopathy for reducing the herbicide imports" run by the Department of Agronomy, University of Agriculture, Faisalabad, Funded by HEC (30-09-2006-30-09-2007).

Administrative Experience:

i. Member Board of Studies, Department of Agronomy, Faculty of Agricultural Sciences & Technology, University of Layyah, Layyah (14.02.2022 –to date)
ii. Member Board of Studies, Department of Agronomy, Faculty of Agricultural Sciences & Technology, BZ University, Multan (14.02.2022 –to date)
iii. Member, Departmental Tenure Review Committee (DTRC), Cholistan Institute of Desert Studies (CIDS), The Islamia University of Bahawalpur, Bahawalpur (31-05-2022 to date).
iv. Member/Secretary, Scrutiny Committee of Scholarships, Faculty of Agricultural Sciences & Technology, BZ University, Multan (11-02-2022 to 13-05-2024).
v. Member/Secretary, Bio-ethical Committee, Faculty of Agricultural Sciences & Technology, BZ University, Multan (09-01-2020 to date).
vi. Deputy Incharge, Examination Cell, Faculty of Agricultural Sciences & Technology, BZ University, Multan (26-06-2019 to date).
vii. Member, Library Committee, Faculty of Agricultural Sciences & Technology, BZ University, Multan (03-08-2017 to date).
viii. Secretary, Time Table Committee for undergraduate program, Faculty of Agricultural Sciences & Technology, BZ University, Multan (09-08-2017 to 25-11-2023).
ix. Deputy DSA for under graduate program, Faculty of Agricultural Sciences & Technology, BZ University, Multan (08-09-2017 to 28-02-2020).
x. Coordinator for undergraduate program (Evening), Faculty of Agricultural Sciences & Technology, BZ University, Multan (01-11-2017 to30-10-2019).
xi. Member, Technical Purchase Committee, BZU Sub Campus Lodhran (08-01-2018 to date).
xii. Member, Technical Purchase Committee, Faculty of Agricultural Sciences & Technology, BZ University, Multan (24-01-2018 to date).
xiii. Member refreshment committee for 14th Convocation of BZ University, Multan held on 25 October, 2017

Memberships:

i. Life time member of Weed Science Society of Pakistan (2015- to date).
ii. Active member of Agrivarsity Scouts Group, University of Agriculture, Faisalabad (2001-2013).
iii. Member of Qirat and Naat club, University of Agriculture, Faisalabad (2001-2013).

iv. Departmental Councilor of the Agrarian Society, Faculty of Agriculture, University of Agriculture, Faisalabad (2003-2013)
v. Member of Pakistan Society of Agronomy (2010-to date)
vi. Incharge of the book publication of SAFE (2006-2008)
vii. In charge of Albadar Blood Donor Society UAF (2007-2008)
viii. Member of Cricket organizing committee in Hostels (2008-2009)
ix. Actively participate in new admission for new students (2005-2008)

Editor of Journals:

1. Managing Editor of Journal of Arable Crops and Marketing.
2. Co-Guest Editor of Special Issue "Frontiers in Plant-Microbes Symbiosis Towards Sustainable Agricultural Crops Productivity Under Abiotic Stress" AGRONOMY an Open Access Journal by MDPI

Research Work:

Publications:		**87**
	Research Papers with Impact Factor:	35
	Research Papers in Recognized Journals:	14
	Research Papers in Local Journals:	10
	Research Papers in Conference Proceedings:	25
	Books	01
	Book Chapters	02
	Total Citations (Google Scholar):	800
	h-index (Google Scholar):	15
	i-10 index (Google Scholar):	25
	Impact Factor	**70.487**
Supervision:		
	PhD. Scholars Supervised/Co-Supervised:	05
	PhD. Scholars being Supervised/Co-supervised:	09
	M.Sc. (Hons.) Agri. Supervised:	27
	M.Sc. (Hons.) Agri. Being Supervised:	02
	B.Sc. (Hons.) Agri. Supervised/Internship:	50
	B.Sc. (Hons.) Agri. Being Supervised/Internship:	00

Courses Taught

Under graduate

Sr. #	Course #	Course title	Credit hours
1	AGR-201	Field crop production I	3(2-2)
2	AGR-202	Field crop production II	3(2-2)
3	AGR-202	Agriculture water management	3(2-1)
4	AGR-310	Biological nitrogen fixation	3(2-2)
5	AGR-410	Plant and Soil analysis	2(1-2)
6	AGR-401	Medicinal and special crops	3(2-2)
7	AGR-402	Internship/research project	4(0-8)
8	FMP-311	Farm mechanization	2(1-2)
9	AEC-102	Introduction to economics & Agri. economics	3(3-0)
10	I&D- 312	Irrigation Practices	2(1-2)

Postgraduate

1	**AGR-513**	**Crop nutrition management**	**3(2-2)**

Research Projects Submitted:

Sr.	Title	Funding Agency	Amount	PI/Co-PI	Status
1.	Development of Water Saving Technique For Sunflower Cultivation	PARC (ALP)	12.25MPKR	P.I	Submitted
2.	Employing agronomic approach to remove time conflict cotton wheat system and Improving heat resistance in wheat at reproductive phase with exogenous use of GABA	PARB	8.5MPKR	Co-PI	Submitted
3.	Exploring Management Strategies for Weeds Infestation Under Various Irrigation Methods in Upland Bt. Cotton	IFS	1.2 MPKR	P.I	Submitted
4.	Exploring the impact of exogenously applied polyamines in water saving wheat cultivation	MNFR	0.97MPKR	P.I	Submitted

Research Projects On going

Sr.	Title	Funding Agency	Amount	PI/Co-PI	Status
1.	Comparative efficacy of hybrids and synthetic maize cultivars under different organic fertilizer sources and irrigation regimes.	BZU (2021-22)	0.35MPKR	PI	In Progress
2.	Crop management strategies in changing climate under cotton wheat cropping system	HEC (2018-21)	3.2 MPKR	PI	In Progress
3.	Exploring management strategies for early sown upland Bt cotton in wheat based cropping system under water deficit conditions	HEC (2017-20)	5.0 M PKR	Co-PI	In progress

Research Projects Completed:

Sr.	Title	Funding Agency	Amount	PI/Co-PI	Status
1.	Impact of polyamines and nitrogen application on the water economy of hybrid maize (*Zea mays L.*).	HEC (2008-13)	1.700M PKR	PI	completed
2.	Response of transplanted fine rice to various nitrogen, zinc and irrigation regimes under semiarid irrigated environment	BZU (2014-15)	0.4 M PKR	PI	Completed
3.	Exploring the role of polyamines on water economy of wheat	HEC (2014-15)	0.5 M PKR	PI	Completed
4.	Effect of nitrogen application rates on growth and yield of cotton varieties	BZU (2015-16)	0.2 M PKR	PI	Completed

5.	The influence of phosphate solubilizing bacteria on growth and yield improvement of wheat cultivar (Galaxy) under nutrient stress condition.	BZU (2015-16)	0.2	M PKR	PI	Completed
6.	Improving grain yield and WUE of wheat under drought stress conditions by applying late foliar application of Magnesium	BZU (2016-17)	0.3	MPKR	P.I	Completed
7.	Potassium nutrition of cotton cultivars under the agro-ecological conditions of Multan, Pakistan.	BZU (2016-17)	0.5	MPKR	P.I	Completed
8.	Influence of magnesium fertilization under different rice cultivation systems (Flooded, Aerobic)	BZU (2016-17)	0.3	MPKR	P.I	Completed
9.	Exploring the role of polyamines on water economy of wheat (*Triticum aestivum* L)	BZU (2016-17)	0.3	MPKR	P.I	Completed
10.	Influence of Nitrogen Application on Growth and Yield of Cotton	BZU (2016-17)	0.3	MPKR	P.I	Completed
11.	Impact of Boron application under different water saving rice cultivation systems.	BZU (2016-17)	0.3	MPKR	P.I	Completed
12.	Influence of foliage applied zinc on growth and yield of sunflower	BZU (2017-18)	0.4	M PKR	PI	Completed
13.	Influence of seed priming and different nitrogen levels on growth and yield of maize (*Zea mays* L.)	BZU (2017-18)	0.4	M PKR	PI	Completed
14.	Growth and Productivity of Advanced Cotton Cultivars as Influenced by Sowing Time and Nitrogen Fertilizer under the Agro-Climatic Conditions of Southern Punjab	BZU (2017-18)	0.5	M PKR	PI	Completed
15.	Effect of foliage applied zinc on growth and yield of different maize hybrids	BZU (2017-18)	0.4	M PKR	PI	Completed

PhD Students Supervised

S. No	Name of Students & Regd. No	Thesis Title	Year of Passing
01	Ghulam Sabir Hussain Regd. No. 2011-ag-215	Productivity of Advanced Cotton Cultivars as Influenced by Sowing Time and Nitrogen Levels Under the Agro Ecological Conditions of Southern Punjab	2021
02	Muhammad Nadeem Shah Regd. No. 2010-ag-236	Comparative efficacy of hybrids and synthetic maize cultivars under different organic fertilizer sources and irrigation regimes.	2022
03	Shahkar Ali Regd. No. 2010-ag-237	Impact of exogenously applied Osmoprotectants on various wheat cultivars under drought stress conditions.	Result waiting

04	Hafiz Shakeel Ahmad Regd. No. 2009-ag-66	Effect of Phosphorus and Boron Application on Wheat under different Sowing Methods.	Result waiting
05	Syed Tahir Raza Gardezi Regd. No. 2014-ag-214	Potassium nutrition of cotton cultivars under the agro-ecological conditions of Multan, Pakistan.	2022
06	Miher Iftikhar Ahmad	Enhancing Bt. Cotton (*Gossiyum hirsutum* L.) Productivity by different phosphorus management strategies	2021
07	Muhammad Usman Masood Bhutta Regd. No.	Growth and productivity of chickpea (*Cicer arietinum* L.) as influenced by exogenous application of ß-amino butyric acid (BABA) under arid climatic conditions.	2023
08	Mehrab Khan Regd. No.2010-ag-214	Effect of sowing time, sowing techniques and different organic and inorganic fertilizer sources on growth, yield and oil quality of sunflower (*Helianthus annus* L.) hybrids under water deficit conditions.	Result waiting
09	Sohail Hasan Regd. No.2010-ag-85	Influence of different nitrogen sources along with Zinc and Boron application methods on wheat (*Triticum aestivum* L.) under various tillage systems.	Result waiting

PhD Students being Supervised/Co-Supervised

S. No	Name of Students & Regd. No	Thesis Title	Status
01	Tahir Mehmood Regd. No.	Agronomic Management for Corn (*Zea mays* L) crop and Biofuel Production	Conti....
02	Ghulam Murtaza	Integrated nutrient management strategies to improve the productivity and zinc bio-fortification of wheat under limited water conditions.	Conti....
03	Shakir Shehzad	Integrated effects of Seed Priming, Nitrogen fertilizer and organic manures on growth and yield of wheat and chickpea crop.	Conti....
04	Muhammad Adnan Yousaf	Effect of different levels and application methods of micronutrients on growth, yield, and quality of maize (*Zea mays* L.) under changing climatic conditions of Southern Punjab	Conti....
05	Zain ul Islam	Impact of various agronomic management strategies on water economy of different pearl millet (*Pennisetum glaucum* L.) cultivars.	Conti....
06	Mumtaz Ahmad Regd. No.		Conti....
07	Abdul Wahid		Conti....
08	M. Sami Ullah		Conti....
09	Hafiz Saad Saeed		Conti....

10	Muhammad Tahir Naveed		Conti....
11	Muhammad Faisal		Conti....

MS/MPhil Students Supervised and being supervised

S. No	Name of Students & Regd. No	Thesis Title	Year of Passing
01	Muhammad Usman Ghani Regd. No. MSA-15-25	Influence of seed priming and different nitrogen levels on growth and yield of maize (*Zea mays* L.)	2018
02	Muhammad Usman Akbar Regd. No. MSA-15-31	Yield comparison of direct seeded and transplanted fine rice under agro ecological conditions of Multan	2018
03	Muhammad Ehmer Regd. No. MSA-15-36	Influence of foliage applied zinc on growth and yield of sunflower	2018
04	Raza Ali Regd. No. MSA-15-50	Effect of foliage applied zinc on growth and yield of different maize hybrids	2018
05	Kamran Qasim Regd. No. MSA-15-52	Influence of exogenous application of silicon on growth and yield of maize under water deficit conditions	2019
06	Muhammad Nasir Regd. No. MSA-15-57	Effect of seed coating and seed priming with S on germination and yield of transplanted fine rice	2019
07	Muhammad Azhar Regd. No. MSA-16-10	Influence of different levels of potash on growth, yield and oil quality of sunflower hybrids	2019
08	Nureen Rafeeq Regd. No. MSA-	Exploring the role of various methods of potash application on mungbean (*Vigna munga* L) under limited water supply.	2019
09	Syed Mohamman Abbas Regd. No. MSA-16-38	Influence of exogenously applied growth enhancers on maize growth and yield under water deficit conditions.	2019
10	Muhammad Furqan Qamar Regd. No. MSA-16-16	Effect of foliar applied potash on growth and yield of maize hybrids.	2020
11	Muhammad Jahanzaib Shafi Regd. No. MSA-	Influence of foliage applied Moringa leaf extracts on growth and yield of sunflower (*Helianthus annus* L) under water deficit conditions.	2020
12	Nazia Qasim Regd. No. MSA-	Growth and yield of sunflower (*Helianthus annus* L) hybrids as affected by foliar application of krund water extracts.	2020
13	Shahan Ali Regd. No. MSA-	Effect of exogenous application of salicylic acid on growth and yield of different maize hybrids (*Zea mays* L)	2020
14	Ahmad Raza Shahid	Effect of split doses of potassium on growth and yield responses of castor bean (*Ricinus communis* L) under different irrigation regimes.	2020
15	Muhammad Muzamil	Effect of slow releasing nitrogenous fertilizer on growth and yield of maize under different sowing methods.	2021
16	Faraz Ahmed	Improving the yield and oil contents of different canola cultivars by foliar application of different zinc levels.	2021
17	Asma	Exploring the role of Iron and Zinc on growth and yield of different sunflower cultivars.	2021
18	Muhammad Hamza Rehman	Bio fortification of foliage applied zinc on different maize cultivars under water deficit conditions	2022

19	Rana Umair Ahmad	Response of different maize cultivars to foliage applied salicylic acid under water deficit conditions	2022
20	Abdul Qadeer	Response of maize to foliar application of boron under water deficit conditions	2022
21	Ghulam Murtaza	Influence of different levels of potash and zinc along with different priming techniques on growth and yield of wheat.	2022
22	Shahzad Abid	Growth and productivity of Wheat (*Triticum aestivum* L.) as influenced by different levels of Zinc and Nitrogen application under drought stress.	2023
23	Khalil Nazeer	Organic amendments along with different phosphorus levels to mitigate the effects of drought stress on growth and productivity of zinc bio-fortified wheat (*Triticum aestivum* L.).	2023
24	Muhammad Faheem Sajjad	Exploring the role of different organic and inorganic fertilizer sources on zinc bio-fortified wheat (*Triticum aestivum* L.) under water deficit conditions.	2023
25	Muhammad Shoaib Fraz	Effect of exogenous application of potash on growth and productivity of wheat under drought stress.	2024
26	Mujahid Hussain	Impact of foliar application of boron on different cultivars of wheat (*Triticum aestivum* L.) under water deficit conditions.	2024
27	Shahir Bano	Growth and yield of spring planted maize as influenced by farmyard manure and nitrogen application rates under limited water supply.	2024
28	Ikrama Hussain	Effect of different levels of Zinc and Boron on growth and yield of wheat (*Triticum aestivum* L.) under different sowing dates.	2025
29	Moin uddin Haider	Exploring the role of exogenously applied moringa leaf extract and zinc bio-fortification on growth, yield, quality and net returns of wheat (Triticum aestivum L.).	2025
30	Mahmood Shafi		2026

BS/B.Sc. (Hons) Agri. Students Supervised and being supervised

S. No	Name of Students & Regd. No	Thesis Title	Year of Passing
01	Aroosa Kanwal	Internship report	2017
02	Kanwar Haris Ali	Internship report	2017
03	Syed Mohamman Abbas	Internship report	2017
04	Asif Amin	Internship report	2017
05	Komal Tariq	Internship report	2017
06	Muhammad Ikram	Internship report	2018
07	Shoaib Asghar	Internship report	2018
08	Nausheen Zahid	Internship report	2018
09	Muhammad Danial Khan	Internship report	2018

10	Sumiyya Sohaib	Internship report	2018
11	Asad Ali	Internship report	2018
12	Asma	Internship report	2019
13	Hamza Nisar	Internship report	2019
14	Muhammad Luqman	Internship report	2019
15	Fahad Farooq	Internship report	2019
16	Rizwan Shafiq	Internship report	2019
17	Mudassir Ali	Internship report	2019
18	Muhammad Ashraf Afzal	Internship report	2020
19	Muhammad Hamza	Internship report	2020
20	Alayna Bushra	Internship report	2020
21	Muhammad Sultan	Internship report	2020
22	Sibtain Abbas	Internship report	2021
23	Rabia Afzal	Internship report	2021
24	Muhammad Shahbaz Khan	Internship report	2021
25	Muhammad Usman	Internship report	2021
26	Zain ullah Zain Chattha	Internship report	2021
27	Waseem Akram	Internship report	2021
28	Zarar Ahmad	Internship report	2021
29	Ghulam Yasin	Internship report	2021
30	Hassan Nadeem	Internship report	2021
31	Muhammad Hasham	Internship report	2022
32	M. Muzammil Hassan	Internship report	2022
33	Muhammad Shehzad	Internship report	2022
34	Hamid Ali khan	Internship report	2022
35	Waheed Abbas	Internship report	2022
36	Asfa Bibi	Internship report	2022
37	Junaid Iqbal	Internship report	2022
38	Tahir Jameel	Internship report	2022
39	Hafiz Zohaib Faheem	Internship report	2022
40	Muhammad Saad	Internship report	2022
41	Huzama Malik	Internship report	2022
42	Beshama	Internship report	2023
43	Abdul Rehman	Internship report	2023
44	Muhammad Yasin Javed	Internship report	2023

45	Muhammad Baqir Imam	Internship report	2023
46	Moin uddin Haider	Internship report	2023
47	Bilawal Abbas	Internship report	2024
48	Muhammad Fahad Nadeem	Internship report	2024
49	Muhammad Saqlain Zafar	Internship report	2024
50	Muhammad Talha Mehfooz	Internship report	2024

Research Papers/Publications:

Research Papers Foreign/ Having Impact Factor

1. Hakoomat Ali, **Shabir Hussain*** and Hafiz Shakeel Ahmad, 2024. Effect of Basal and Foliar Application of Phosphorus and Boron on wheat growth and yield. Pak. J. Bot., 56(2): 00-00 **IF=0.972**
2. Shahkar Ali, Hakoomat Ali, **Shabir Hussain**, Muhammad Naveed and Muhammad Nadeem Shah, 2024. Enhancing drought tolerance in *Triticum aestivum* L. Crops through the application of organic growth enhancers and Osmoprotectants. Pak. J. Bot., 00: 00-00 **IF=0.972**
3. Hakoomat Ali, **Shabir Hussain*** and Hafiz Shakeel Ahmad, 2024. Performance of Wheat Cultivars under Different Phosphorus Levels and Sowing Methods. Pak. J. Bot., 56(2): 00-00 **IF=0.972**
4. ALI, S.* – ALI, H. – **HUSSAIN, S.*,** 2023. Influence of Osmoprotectants and their different application methods on wheat (*Triticum aestivum* L.) Cultivars under water deficiency in south Punjab region of Pakistan. Applied Ecology and Environmental Research, 21(5):3895-3910. **IF=0.721**
5. BHUTTA, M. U. M. – ALI, H.* – **HUSSAIN, S.,** 2023. Seed Priming With B Aminobutyric Acid (Baba) Improved Production Of Chickpea Genotypes By Optimizing Antioxidant Activity Under Different Moisture Conditions. Applied Ecology and Environmental Research 21(4):2863-2880. **IF=0.721**
6. Mashael M. Alotibi[a], Nahaa M. Alotaibi[b],[*]Ghulam Sabir Hussain[c], **Shabir Hussain[c]**, Suleman Haider Shah[d,e], Adel M. Ghoneim[f], Khadim Dawar[g], Misbah Hareem[h], 2023. Use of zinc quantum dot biochar and AMF for alleviation of Cd stress in maize: Regulation of physiological and biochemical attributes. Plant Stress 10: 01-14 **IF=5.00**
7. Muhammad Nadeem Shah, David L. Wright, **Shabir Hussain**, Sypridon D. Koutroubas, Ramdeo Seepaul, Sheeja George, Shahkar Ali, Muhammad Naveed, Mehrab Khan,

Muhammad Tanveer Altaf, Kamran Ghaffor, Khadim Dawar, Asad Syed and Rajalakshmanan Eswaramoorthy, 2023. Organic fertilizer sources improve the yield and quality attributes of maize (Zea mays L.) hybrids by improving soil properties and nutrient uptake under drought stress. Journal of King Saud University – Science 35:01-12 **IF= 3.829**

8. **Shabir Hussain**, Muhammad Nadeem Shah, 2023. ORGANIC AMENDMENTS MITIGATE DROUGHT STRESS-INDUCED OXIDATIVE CHANGES IN SYNTHETIC CULTIVARS OF MAIZE. Pak. J. Bot., 55(2): 429-436 **IF=0.972**
9. Muhammad Mehboob Hassan Khan, Niaz Ahmed, Umber Ghafoor, Muqarrab Ali, Muhammad Arif Ali, Muhammad Irfan, **Shabir Hussain**, Shah Fahad, Vibhor Agarwal, Shams H Abdel-Hafez, Reham Ali, Syed Mohammed Basheeruddin Asdaq, Nadiyah M Alabdallah, Ali Tan Kee Zuan, Subhan Danish, Rahul Datta, 2022. Synchronization of Boron application methods and rates is environmentally friendly approach to improve quality attributes of *Mangifera indica* L. On sustainable basis. Saudi Journal of Biological Sciences. 29 (3): 1869-1880 **IF= 4.052**
10. Ashfaq Ahmad Rahi, **Shabir Hussain**, Baqir Hussain, Khurram Shehzad Baig, Muhammad Saeed Tahir, Ghulam Sabir Hussain, Tayebeh Zarei, Subhan Danish, Muhammad Naeem Akhtar, Shah Fahad, Shamsher Ali, Ashraf Atef Hatamleh, Munirah Abdullah Al-Dosary, Muhammad Saleem, Rahul Datta, 2022. Alleviation of Cd stress in maize by compost mixed biochar. Journal of King Saud University-Science. 34: (102014) 01-12 **IF= 3.829**
11. Rehana Sardar, Asma Zulfiqar, Shakil Ahmad, Anis Ali Shah*, Rana Khalid Iqbal, **Shabir Hussain,** Subhan Danish*, Umber Ghafoor, Shah Fahad*, Jiri Krucky, Sami Al Obaid, M. J. Ansari, Rahul Datta, 2022. Proteomic Changes in Various Plant Tissues Associated With Chromium Stress in Sunflower. Saudi J. Biol. Sci. 29 (04): 2604–2612 **IF= 4.219**
12. Sajjad Hussain, Muhammad Irfan, Abdul Sattar*, **Shabir Hussain**, Sami Ullah, Haseeb ur Rehman, Farukh Nawaz, Abdulrahman Al-Hashimi, Mohamed S. Elshik, Mumtaz A Cheema, Jianjun Yang*, 2022. Alleviation of Cadmium Stress in Wheat through the Combined Application of Boron and Biochar via Regulating Morpho-Physiological and Antioxidant Defense Mechanisms. Agronomy, 12, 434:01-15 **IF=3.417**
13. Haseeb-ur-Rehman, Malik Ghulam Asghar, Rao Muhammad Ikram, Sarfraz Hashim, **Shabbir Hussain**, Muhammad Irfan, Khuram Mubeen, Muqarrab Ali, Mahmood Alam, Mazhar Ali, Imran Haider, Muhammad Shakir, Milan Skalicky, Sulaiman Ali Alharbi,

Saleh Alfarraj, 2022. Sulphur coated urea improves morphological and yield characteristics of transplanted rice (*Oryza sativa* L.) through enhanced nitrogen uptake. Journal of King Saud University – Science 34 (1): 1-7 **IF= 4.011**

14. Abdul Saboor, Muhammad Arif Ali, **Shabir Hussain**, Hesham A., El Enshasy, Sajjad Hussain, Niaz Ahmed, Abdul Gafur, R.Z. Sayyed, Shah Fahad, Subhan Danish, Rahul Datta, 2021. Zinc Nutrition and Arbuscular Mycorrhizal Symbiosis Effects on Maize (*Zea mays* L.) Growth and Productivity. Saudi J. Biol. Sci28(11): 6339-6351 **IF= 4.219**
15. Abdul Saboor, Muhammad Arif Ali*, **Shabir Husain**, Muhammad Saeed Tahir, Muhammad Irfan, Muhammad Bilal, Khurram Shehzad Baig, Rahul Datta, Niaz Ahmed, Subhan Danish and Bernard R. Glick, 2021. Regulation of Phosphorus and Zinc Uptake in relation to Arbuscular Mycorrhizal Fungi for Better Maize Growth. Agronomy, 11 (2322):01-15 **IF=3.417**
16. Ashfaq Ahmad Rahi, **Shabir Hussain**, Muhammad Irfan, Muhammad Baqir Hussain, Muqarrab Ali, Khurram Shahzad, Fatemeh Gholizadeh, Tayebeh Zarei, Niaz Ahmed, Muhammad Arif Ali, Subhan Danish, Mohammad Javed Ansari, Shah Fahad, Rahul Datta, Sidra Mubeen, 2021. Improvement in Growth, Chlorophyll Contents and Gas Exchange Attributes of Maize by Compost Mixed Biochar under Cadmium Induced Stress. Scientific Reports J. Springer Nature. 00-00-00 **IF=4.379 accepted**
17. Javed Iqbal, Sidra Kiran, **Shabir Hussain** , Rana Khalid Iqbal, Umber Ghafoor, Uzma Younis, Tayebeh Zarei, Misbah Naz, Sevda Ghasemi Germi, Subhan Danish, Mohammad Javed Ansari and Rahul Datta, 2021. Acidified Biochar Confers Improvement in Quality and Yield Attributes of Sufaid Chaunsa Mango in Saline Soil. Horticulturae, 7(418): 1-17 **IF= 2.331**
18. **Shabir Hussain**, Hakoomat Ali, Syed Tahir Raza Gardezi, 2021.Soil applied Potassium Improves Productivity and Fiber Quality of Cotton Cultivars Grown on Potassium Deficient Soils. PLOS ONE, 16 (04):01-09 **IF= 2.74**
19. Sher, A., A.S. Tahira, A. Sattar, A. Nawaz, A. Qayyum, **S. Hussain** and A. Manaf, 2021. Foliage application of 5-aminolevulinic acid alleviates drought stress in sunflower (*Helianthus annuus* L.) through improving stay green and antioxidant enzymes activities. Acta Physiologiae Plantarum, 43(22):01-07 **IF=1.76**
20. Essa Ali, Zeshan Hassan, Muhammad Irfan, **Shabir Hussain**, Haseeb-ur- Rehman, Ahmad Naeemhmad Naeem Shahzad, Jawad Munawar Shah, Murtaza Ali, Saad Alkahtani, Mohamed M. Abdel-Daim, Syed Asad Hussain Bukhari, Shafaqat Ali, 2020. Indigenous

Tocopherol Improves Tolerance of Oilseed Rape to Cadmium Stress. Frontiers Plant Sci., 11: 01-12 **IF=4.4**

21. **Shabir Hussain**, Hakoomat Ali*, Ghulam Sabir Hussain, 2020. Effect of sowing time on growth, productivity and net returns of advanced cotton (*Gossypium hirsutum* l.) Cultivars under the agro climatic conditions of southern Punjab, Pakistan. Applied Ecology and Environmental Research, 18(6):7843-7852.**IF=0.721**
22. Hakoomat Ali, Ayaz Ahmad, **Shabir Hussain***, 2020. The effect of exogenous phosphorous application on the growth, yield, quality and net returns of upland cotton (*gossipium hirsutum* L.). Applied Ecology and Environmental Research, 18(1):769-781 **IF=0.721**
23. Muhammad Nawaz, Shahbaz Khan, Hakoomat Ali, Muhammad Ijaz, Muhammad Umer Chattha, Muhammad Umair Hassan, Sohail Irshad, **Shabir Hussain** & Sadia Khan, 2019. Assessment of environment-friendly usage of spent wash and its nutritional potential for sugarcane production. *Communications in Soil Science and Plant Analysis*, 50:1239-1249 **IF=0.540**
24. A. Sattar, A. Sher, M. Ijaz, M. Irfan, M. Butt, T. Abbas, **S. Hussain**, A. Abbas, M. S. Ullah and M. A. Cheema, 2019. Biochar application improves the drought tolerance in maize seedlings. *Phyton, Int. J. Exp*. Bot. 88(4):379-388 **IF=0.262**
25. Hakoomat Ali, Mamoona Arooj, Ahsan Areeb, Shakeel Ahmad, Rana Nauman Shabbir, **Shabir Hussain**, Haseeb -ur- Rehman, Syed Asad Hussain Bukhari, Muhammad Saqib, 2019. Influence of allelochemicals with reduced doses of pre and post emergence herbicides on cotton under different irrigation techniques. Planta Daninha J. 37: 01-10 **IF=0.40**
26. Hakoomat Ali, Muhammad Saeed Tahir, **Shabir Hussain***, Rana Nauman Shabbir, Ahsan Areeb and Ahmad Sher, 2019. Combined Foliar Applied Nitrogen, Potassium and Magnesium Improved Yield, Fiber Quality and WUE of Cotton under Water Limited Environment. Int. J. Agric. Biol., 22: 115–121. **IF= 0.869**
27. Abdul Sattar, Mumtaz A. Cheema, Ahmad Sher, Tahira Abbas, Muhammad Irfan, Muhammad Ijaz, **Shabir Hussain** and Qasim Ali, 2018. Foliage Applied Silicon Alleviates the Combined Effects of Salinity and Drought Stress on Wheat Seedlings. Int. J. Agric. Biol., 20: 2537–2543. **IF= 0.869**
28. M.U. Chattha, H.Ali, M. Umer Chattha, M. U. Hassan, M.B. Chattha, M. Nawaz and **S. Hussain**, 2018. Combined application of distillery spent wash, bio-compost and inorganic

fertilizers improves growth, yield and quality of wheat. The J. ANIM. PLANT SCI. 28 (4): 1112-1120. **IF=0.42**

29. Hakoomat Ali, Ijaz Ahmad, **Shabir Hussain***, Muhammad Irfan, Ahsan Areeb and Rana Nauman Shabir, 2018. BASAL APPLICATION OF POTASSIUM NUTRITION ENHANCES CANE YIELD, JUICE QUALITY AND NET RETURNS OF SUGARCANE (*Saccharum Officinarum*). Pak. J. Agri. Sci. 55 (2):321-329 **IF=0.69**
30. Ali, H., N. Sarwar, M. Arooj, A. Areeb and **S. Hussain**, 2017. APPLICATION OF PRE AND POST EMERGENCE HERBICIDE UNDER IMPROVD FIELD IRRIGATION SYSTEM PROVED A SUSTAINABLE WEED MANAGEMENT STRATEGY IN COTTON CROP. PLANTA DANINHA J. 35:1-12 **IF=0.40**
31. Saleem, M., R. Mukhtar, **S. Hussain**, H. Raza, M. F. Iqbal, M. K. Khan and Z. Iqbal, 2017. Efficacy of seed priming techniques on performance of maize hybrids in Multan. Int. J. Curr. Res. Biol. Med. 2: 1-8 **IF=2.005**
32. Ahmad, S., H. Ali, U. Farooq, S. U. Khan, A. Rehman, N. Sarwar, A. N. Shahzad, H. Dogan, **S. Hussain,** M. T. Sultan, A. Waheed, M. Z. Haq, K. Hussain, M. A. Khan, 2016. Improving nitrogen-use and radiation-use efficiencies of C4 summer cereals by split nitrogen applications under an irrigated arid environment. Turk. J. Agric. For. 40: 280-289 **IF=1.31**
33. R. N. Shabbir, E. A. Waraich, H. Ali, F. Nawaz, M. Y. Ashraf, R. Ahmad, M. I. Awan, S. Ahmad, M. Irfan, **S. Hussain** and Z. Ahmad, 2016. Supplemental exogenous NPK application alters biochemical processes to improve yield and drought tolerance in wheat (Triticum aestivum L.). Environ Sci. Pollut. Res., 23:2651–2662 **IF=2.82**
34. **Hussain, S**., M. Farooq, M.A. Wahid and A. Wahid, 2013. Seed priming with putrescine improves the drought resistance of maize hybrids. Int. J. Agric. Biol., 15: 1349–1353 **IF=0.869**
35. **Hussain, S.,** M. F. Saleem, M. Y. Ashraf, M. A. Cheema and M. A. Haq, 2010. Abscisic acid, a stress hormone helps in improving water relations and yield of sunflower (*Helianthus annuus* L.) hybrids under drought. Pak. J. Bot., 42(3): 2177-2189 **IF=0.658**

Research Papers in HEC Recognized Journals

1. Shahbaz Hussain, Muhammad Sajid*, Yasir Mehmood, Muhammad Sheeraz, Muhammad Irfan, **Shabir Hussain**, Shahid Ameer, Muhammad Mehtab, Tatheer Abbas, 2023. Determining the Efficacy of Plant Extracts and Chemicals against Bacterial Leaf Spot of Spinach. Plant Health 02 (01): 17-26 **HEC Recognized**

2. Muhammad Tayyab, Muhammad Sajid, Yasir Mehmood, Muhammad Sheeraz, **Shabir Hussain**, Muhammad Irfan, Tatheer Abbas, Shahbaz Hussain and Sohail Akhtar Tabassam, 2023. Impact of Plant Extracts and Chemicals against Bacterial Blight of Pomegranate. J. Agri. Vet. Sci. 02 (3): 223-230 **HEC Recognized**
3. Saira Azmat*, Muhammad Waris, Muhammad Nawaz Sukhera, Akhtar Hameed, Khizar Razzaq, **Shabir Hussain**, Ghulam Rasool, Attaullah, 2023. Screening of Various Wheat Lines Against Puccinia Triticina and its Management through Synthetic Fungicides. Plant Health 02 (01): 01-07 **HEC Recognized**
4. Adnan Shabir, Muhammad Ijaz*, Ahmed Sher, Abdul Sattar, Sami Ul-Allah, Tahira Abbas, **Shabir Hussain**, Muhammad Saqib, Muhammad Yasir Ali, Farukh Nawaz, 2023. Combine Application of Zinc and Boron Improves Pearl Millet (*Pennisetum glaucum* L.) Performance under No Tillage and Plough Tillage. J. Plant Environ. 05 (02): 71-80 **HEC Recognized**
5. Ghulam Murtaza, Muhammad Nadeem Shah*, Muhammad Talha Saif, Muhammad Shaheryar, Qurat-ul-Ain, Muhammad Atif Yaseen, Hafiz Saqib Hayat, **Shabir Hussain**, Aamir Aziz, Momna Hayat, Muhammad Tanveer Altaf, Muhammad Wajahat Rasool, Muneera Abbas, Muhammad Shahbaz, 2023. Exogenous Application of Potassium and Zinc for the Growth, Yield and Agronomic Zinc Biofortification of Wheat (*Triticum aestivum* L.). J. Arab. Crops Market. 05 (02) 2023. 55-62
6. Usman Hassan, Liaqat Ali, Muhammad Yonus, Wardah Qamar, Tariq Chauhdhary, Ishtiaq Hassan, **Shabir Hussain**, 2022. Evaluation of planting methods for Rice in Rice-wheat zone of Sheikhupura, Pakistan. J. Arab. Crops Market. 04 (02): 89-95 **HEC Recognized**
7. Rizwan Taj Khan, Komal Mumtaz, Basharat Mahmood, Muhammad Farooq Ahmed, Saqib Saleem, Sami Ullah, Sohaib Azam, Zahid Hussain Khan, **Shabir Hussain**, 2022. EFFECT OF DIFFERENT HORMONAL CONCENTRATIONS ON IN-VITRO REGENERATION OF RICE (ORYZA SATIVA L.). Pak. J. Biotechnol. 19 (2): 97-104. **HEC Recognized** (X-Category)
8. Muhammad Naveed, Shahkar Ali, Muhammad Nadeem Shah, **Shabir Hussain**, Muhammad Ajmal, Shakir Shahzad, Muhammad Hamza Rehman, Muhmmad Arif, Touqeer Abba, Hafiz Saqib Hayat, Kamran Ghaffor, Ghulam Murtaza, Hakoomat Ali, Ayesha Khan, Mehrab Khan and Anum Bukhari, 2022. Effect of various plant growth regulators and sowing methods on the growth, yield and quality of rice (*Oryza sativa* L.). J. Plant Environ. 04 (02): 100-107 **HEC Recognized**

9. Muhammad Nadeem Shah1, **Shabir Hussain**, Hakoomat Ali, Mehrab Khan, Anum Bukhari, Shahkar Ali, Muhammad Naveed, Muhammad Sohail, 2022. Comparative Screening of Hybrids and Synthetic Maize (Zea mays L.) Cultivars for Drought-Sensitive and Drought-Tolerant Under Different Irrigation Regimes. J. Plant Environ. 04 (01): 09-17 **HEC Recognized**
10. **Shabir Hussain**, Imran Sharif Chaudhry, 2021. Impact of Climate Change on Yield of Major Food Crops in Pakistan. Review of Applied Management and Soc. Sci. 4 (4): 849 – 861 **HEC Recognized**
11. **Shabir Hussain***, Hakoomat Ali, Muhammad Ehmer, 2021. Influence of Foliage Applied Zinc on Growth and Yield of Hybrids Sunflower (*Helianthus Annus* L.). J. Plant Environ. 03 (01) 2021. 39-47 **HEC Recognized**
12. Hakoomat Ali1, **Shabir Hussain***, Aqeela Riaz, 2021. Effect of Phosphorus Application Methods on Growth and Yield of Maize under Water Deficit Conditions. J. Plant Environ. 03 (01) 2021. 17-29 **HEC Recognized**
13. Asma Bashir, Muhammad T. Khan, Raees Ahmed*, Basharat Mehmood, Muhammad T. Younas, Hafiz M. U. Rehman, **Shabir Hussain**, 2020. Efficiency of Selected Botanicals against (Alternaria Solani) Causing Early Blight Disease on Tomato in Azad Jammu and Kashmir. Pak. J. Phytopathol., 32: 179-186 **HEC Recognized**
14. Muhammad Sufyan, Muhammad I. Tahir, Muhammad I. U. Haq, **Shabir Hussain**, Muhammad Saeed, 2020. Effect of Seed Bio Priming with Rhizobacteria against Root Associated Pathogenic Fungi In Chickpea. Pak. J. Phytopathol., 32: 89-96 **HEC Recognized**
15.

Research Papers in Local Journals

1. Ayaz Ahmad*, Hakoomat Ali, **Shabir Hussain**, Waseem Hassan and Riaz Ahmad, 2020. Supplemental application of phosphorus improves yield, quality and net returns of *Gossypium hirsutum*. Pure Appl. Biol., 9(4): 2577-2588
2. **Shabir Hussain**, Hakoomat Ali, Muhammad Ehmer, Waqas Ahmad, 2019. Foliage applied zinc improves growth, yield and oil contents of sunflower hybrids (*Helianthus annus* L.). Journal of Arable Crops and Marketing. 1 (2): 63-69
3. Hakoomat Ali, Asad Abbas, **Shabir Hussain**, Shoukat Ali Abid, Shazia Khaliq, Naeem Sarwar, 2019. Mulches and Nitrogen Application Improves Cotton Yield and Fiber Quality. Journal of Arable Crops and Marketing. 1 (1): 09-13

4. Ahmad Jahanzaib,*, Shahid Hussain, Abdul Saboor, **Shabir Hussain** and Usman Khalid Chaudhry, 2019. Zinc fractions in differently-textured soils of southern Punjab (Pakistan) and status of zinc in flag leaves of wheat. J. Glob. Innov. Agric. Soc. Sci., 7(2): 1-6.
5. Muhammad Faizan Aslam, **Shabir Hussain**, Kumail Fayaz, Hafiz Muhammad Zaid, Malik Ghulam Asghar, Muhammad Jahanzaib Shafi, Faisal Shabir, Zain Ul Abdin, 2018. Wheat (*Triticum aestivum* L.) performance under residue management strategies in maize-wheat rotation. Nature and Science;16(11):139-148
6. Rana N. Shabbir*, **Shabir Hussain**, Hakoomat Ali, Ahsan Areeb, Muhammad Irfan, Zeeshan Ahmed, Shakeel Ahmad, Saadullah Manzoor, 2020. Boron fertilization improves quality and yield of maize (*Zea mays* L.). J. Arab. Crops Market. 01: 05-11
7. Muhammad Irfan, Hakoomat Ali, Shakeel Ahmad, Abdul Sattar, Ahsan Areeb, **Shabir Hussain**, Rana N. Shabbir, Naeem Sarwar, Fida Hussain, 2020. Various tillage systems and sowing methods affect growth and yield related characters of cotton. J. Arab. Crops Market. 01: 13-23
8. **Hussain, S.**, S.A. Wajid, H. Ali, A. Sattar, N. Sarwar, A.N. Shahzad and S. Ahmad. 2015. Application of CERES-WHEAT Model to Simulate Growth, Development and Radiation Use Efficiency of Wheat Crop. ***J. Glob. Innov. Agric. Soc. Sci., 3(2-3): 50-57.***
9. Ali, H., G.S. Hussain, **S. Hussain,** A.N. Shahzad, S. Ahmad, H.R. Javeed, N. Sarwar. 2014. Early sowing reduces CLCV occurrence and improves cotton productivity. Cercetări Agronomice în Moldova 47 (4): 71-81
10. Sattar, A., M. A. Cheema, M.A. Wahid, M. F. Saleem, M.A. Ghaffari, **S. Hussain** and M.S. Arshad, 2013. Effect of sowing time on seed yield and oil contents of canola varieties. Jgiass, 1 (1): 1-4

Books

1. Subhan Danish, **Shabir Hussain,** Niaz Ahmed*, Ashfaq Ahmad Rahi. 2024. **Updates on Organic Farming**. Intech Open Limited, 167-169 Great Portland Street, London, W1W5PF, UNITED KINGDOM, Phone: +44 20 8089 5702

Book Chapters

1. Muhammad Nadeem Shah*, Momna Hayat*, Muhammad Shaheryar, Ali Raza Siddiqui, Adeel Shahid, Usman Arshad, Najma Tabussam, **Shabir Hussain**, Haseeb-Ur-Rehman*, Muhammad Tanveer Altaf. 2024. Drought stress in cereal crops and its mitigation for sustainable production. In: Water-Air-Soil for sustainable agriculture and people well-

being. Editors: Dr. Ristina Siti Sundari, Prof. Dr. Korkmaz Bellitürk, Dr. Zain Musthaq, Dr. Farhan Ahmad. Iksad Publishing House, Ankara / Turkiye. Pp: 240-281

2. Shabbir, R. N., H. Ali, F. Nawaz, **S. Hussain,** A. Areeb, N. Sarwar, S. Ahmad. (2019) Use of Bio fertilizers for Sustainable Crop Production. In: Agronomic crops. 1st edition. Editor: Mirza Hasanuzzaman. Springer Nature Singapore, pp: 149-162

Research Papers/Articles Reviewed

1. Research article entitled "**SELECTION FOR YIELD IMPROVEMENT IN BAMBARA GROUNDNUT (Vigna subterranea L.) VERDC**" for Journal of Plant Breeding and Genetics. **2019**
2. Research article entitled **"HEAVY METALS IMPACT ON PLANTS AND ANIMALS IN RELATION TO SEWAGE WATER"** for the Journal of Science Technology and Development, **2017**

Conference Proceedings

1. National Stakeholders conference on "**Food Value Addition Sector & Its Impact on Economic Growth of Pakistan"** held on May 09, 2024 at Department of Food Science and Technology, Faculty of Food Sciences and Nutrition, B.Z. University, Multan.
2. 8th international conference on "**Global Halal Food Industry: Insights from Pakistan"** held on April 24-25, 2024 jointly organized by Institute of Islamic Studies, Islamic Research Centre and Faculty of Food Sciences and Nutrition, B.Z. University, Multan in collaboration with PHEC, Lahore & Islamic Research Institute, International Islamic University, Islamabad.
3. 5th conference of Asian Allelopathy Society for Allelopathy Research in Asia on "**Allelopathy for Sustainable Ecosystem"** held on January 16-17, 2024 at Institute of Agronomy, Faculty of Agricultural Sciences and Technology, B.Z. University, Multan.
4. 3rd international conference on "**Smart Plant Protection"** held on January 03-04, 2023 at Institute of Plant Protection, MNS University of Agriculture, Multan.
5. International conference on "**Business & Commerce**" held on November 14-16, 2023 at Halley College of Commerce, University of the Punjab, Lahore.
6. 8th international conference of Pakistan Phytopathological Society on "**Sustainable Agriculture & Food Security; A nexus of Plant Pathogens, Climate Change and water Challenges"** held on November 26-28, 2023 at Department of Plant Pathology,

Faculty of Agriculture & Environment, The Islamia University of Bahawalpur, Bahawalpur.

7. Forman International Conference on "**Business & Innovation 2023, (FICBI'23)"** at School of Management, Forman Christian College, Lahore
8. 32nd conference of Pakistan Society of Food Scientists and Technologists (PSFST) on "**Food Crises in Pakistan; Opportunities & Solutions"** held on March 08-09, 2023 organized by Faculty of Food Sciences and Nutrition, B.Z. University, Multan.
9. Shabir Hussain, Muhammad Nadeem Shah, Hakoomat Ali, 2022. Comparative screening of hybrids and synthetic maize (*Zea mays* L.) cultivars for drought sensitive and drought tolerant under different irrigation regimes" In 7th international conference on "**Climate Smart Agriculture: Innovations and Adaptations"** held on June 15-17, 2022 at Faculty of Agriculture, University of Poonch Rawalakot.
10. Shabir Hussain, Muhammad Nadeem Shah, Hakoomat Ali, Mehrab Khan, Anum Bukhari, Asma Mehmood, Shahkar Ali, 2022. Organic Amendments Mitigate the Oxidative Changes Induced by Drought Stress in Synthetic Cultivars of Maize. In 19th international congress of soil science on "**Soil Health and Sustainable Development Goals**" held on March 09-11, 2022 at University of Agriculture Faisalabad, Pakistan
11. Shabir Hussain, Muhammad Nadeem Shah, Hakoomat Ali, Anam Bukhari, 2021. Organic amendments mitigate the oxidative changes induced by drought stress in synthetic cultivars of maize. In 7th international conference of Pakistan Phytopathological Society on "**Phytopathology: Current Scenario and Future Prospects; a Focused Strategy for Food Safety and Security**" held on November 21-23, 2021 at Department of Plant Pathology, University of Agriculture, Faisalabad and Ayub Agriculture Research Institute, Faisalabad.
12. **Shabir Hussain**[*], Hakoomat Ali, Muhammad Ehmer, 2019. Influence of Foliage Applied Zinc on Growth and Yield of Hybrids Sunflower (*Helianthus annus* L.). in 1st international conference on "**Agricultural and Biological Sciences Focusing Food Security & Climate Change**" held on March 27-30, 2019 at Faculty of Basic and Applied Sciences, The University of Haripur, Pakista
13. **Shabir Hussain**[*], Hakoomat Ali, Ayaz Ahmad, 2019. Foliage and seed priming with phosphorus fertilizer improves growth, yield and quality of cotton cultivars. In 4th international conference on "**Food and Nutritional Security in Changing Climate**" held

on March 3-4, 2019 at Institute of Food Science and Nutrition, Bahauddin Zakariya University, Multan and MNS-University of Agriculture, Multan. (**Oral Presentation)**

14. **Shabir Hussain**[*], Hakoomat Ali, Muhammad Furqan Qamar, 2019. Influence of foliage application of potash on growth and yield of maize hybrids (Zea Mays L). In 1st International Conference on "**Sustainable Agriculture: Food Security under Changing Climate Scenarios**" held on April 3-5, 2019 at Ghazi University, DG, Khan. (**Oral Presentation)**
15. Shabir Hussain[*], Hakoomat Ali, 2018. Exogenously applied of spermidine improves drought resistance of hybrid maize. In: 2nd Sino-Pak International Conference on "**Innovations in Cotton Breeding & Biotechnology**" held on November 26-27, 2018 at Department of Plant Breeding & Genetics, Bahauddin Zakariya University, Multan and MNS-University of Agriculture, Multan.
16. Muhammad Irfan[*], Hakoomat Ali, Shabir Hussain, Abdul Sattar, Shakeel Ahmad, Ahsan Areeb and Rana Nauman Shabbir, 2018. Comparison of conventional versus deep tillage systems along with various sowing methods affect growth and yield related traits of cotton. In: 1st International and 2nd National Conference on "**Challenges and Opportunities to Boost Agriculture in Changing Climate**" held on March 26-28, 2018 at College of Agriculture, BZU Bahaddur Sub-Campus Layyah.
17. Hakoomat Ali, Saeed Tahir, Rana Nauman Shabbir, Shabir Hussain* and Ahsan Areeb, 2018. Exogenous application of nitrogen and potassium in Combination with magnesium to improve cotton growth, yield and quality aspects under water deficit conditions. In: 1st International and 2nd National Conference on "**Challenges and Opportunities to Boost Agriculture in Changing Climate**" held on March 26-28, 2018 at College of Agriculture, BZU Bahaddur Sub-Campus Layyah.
18. Ghulam Sabir Hussain, Hakoomat Ali, Shabir Hussain, Sajid Hussain, Muhammad Ijaz, Muhammad Nawaz and Syed Tahir Raza Gardezi, 2018. Growth and productivity of advanced cotton cultivars as Influenced by sowing time under the agro-climatic conditions of southern Punjab. In: 1st International and 2nd National Conference on "**Challenges and Opportunities to Boost Agriculture in Changing Climate**" held on March 26-28, 2018 at College of Agriculture, BZU Bahaddur Sub-Campus Layyah.
19. Hakoomat Ali, **Shabir Hussain**, Muhammad Irfan, Muhammad Saeed Tahir, 2017. Exogenous application of magnesium improves cotton productivity under water deficit conditions. In: International Conference on "Climate Change Threats to Agriculture and

Food Security" held on Nov. 22-24, 2017 at Department of Agronomy & Climate change centre, The University of Agriculture, Peshawar, Pakistan.

20. **Hussain S.**, Hakoomat Ali, 2017. Influence of Seed Priming with Spermine on Germination, Growth and Water Relations of Maize Hybrids under Water Deficit Conditions. In: 1st International Conference on Climate Change and Biodiversity (IC^3B). held on May 2-4, 2017 at Cholistan Institute of Desert Studies (CIDS), The Islamia University of Bahawalpur Pakistan
21. Hakoomat Ali, **Shabir Hussain,** 2017. Combined use of nitrogen and wheat straw improves yield and fiber quality of Cotton. In: 1st International Conference on Climate Change and Biodiversity (IC^3B). held on May 2-4, 2017 at Cholistan Institute of Desert Studies (CIDS), The Islamia University of Bahawalpur Pakistan
22. **Hussain S.**, Hakoomat Ali, 2017. Potassium Nutrition Improves Cane Yield and Juice Quality of Spring Planted Sugarcane (*Saccharum officinarum* L.). in: National Conference on "Challenges and Opportunities to Boost Agriculture in Changing Climate'' held on March 29-30, 2017 at the College of Agriculture, Bahauddin Zakariya University, Bahadur Sub Campus, Layyah.
23. **Hussain S.**, Hakoomat Ali, Mamoona Arooj, 2017. Yield Losses Caused by Weed Flora and Weed Control Measures in Upland Bt. Cotton. In: 3rd international conference on Safe Food for All & Food Expo held on March 2-3, 2017 at BZU, Multan
24. **Hussain, S.,** M.A. Cheema, M. Farooq, A. Wahid, A. Sattar, M. A. Wahid and A.S. Gondal. 2010. Screening of different maize hybrids for drought tolerance. In: 8th National Conference of Pakistan Phytopathological Society held on Nov., 12-14, 2010 at U.A.F.
25. Cheema, M.A., M.A. Wahid, M. Farooq, B.H. Babar, A. Sattar, **S. Hussain,** and M.Tariq. 2009. Growth, yield and quality response of three canola (*Brassica napus*) varieties as affected by different sources of phosphorus fertilizer. In: International Conference on Sustainable Food Grain Production: Challenges and Opportunities held on Oct., 26-27, 2009 at UAF
26.

Seminars/ Conferences/ Events Organized

1. One day Seminar on "**Interview Skills**" held on March 30, 2022 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan (**Organizer**)
2. **Annual Prize Distribution & Dinner, 2019** held on February, 15, 2019 at Faculty of Agricultural Sciences and Technology, BZU, Multan (Organizer)

3. One day training session for Capacity Building on "**Sustainable Development Goals (SDGs)**" organized by the society for sustainable development (SSD) under the Champion of Change (CoC) Project held on December, 24, 2019 at Faculty of Agricultural Sciences & Technology, BZU, Multan
4. One day training workshop on "**Women Entrepreneurship Program 2018**" held on May 04, 2018 at University of Agriculture, Faisalabad, Pakistan (**Organizer**)
5. International Seminar on "**Biochar Use in Changing Climate**" held on October 05, 2018 at Auditorium Gillani Law College, BZU, Multan Organized by Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan (**Organizer**)
6. Training Workshop on "Discover yourself and your student" held on January 23, 2018 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan (**Organizer**)
7. A seminar on " **System App for Sustainable Development Goals**" held on May 08, 2017 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan (**Organizer**)
8. Training Workshop on "**Partial Least Square Structural Equation Modeling (PLS-SEM) Using Smart PLS**" held on April 21, 2017 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan. (**Organizer**)
9. A seminar on "**Wheat Production Challenges in Pakistan under Changing Climate**" March 07, 2017. Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan. (**Organizer**)
10. Farmer's awareness seminar on **'Significance of potash use in cotton productivity'** held on 30 November, 2016 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan. (**Organizer**)
11. International conference on malnutrition "**MALNUTRITION KILLS**! Can we see the writing on the wall?" August, 2016, Institute of Food Science & Nutrition, Bahauddin Zakariya University, Multan, Pakistan. (**Organizer**)
12. Training Workshop on "**The Art of Facilitation**" held on May 19, 2016 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan. (**Organizer**)
13. Training Workshop on **"Discover yourself and others"** May, 06, 2016 at Department of Agronomy, BZU, Multan, Pakistan (**Organizer**)

Trainings:

1. National Workshop on "**Empowering Green Leaders: UI Green Metric Workshop for Sustainable Pathways in Pakistani Universities"** held on October 16, 2023 organized by Quality Enhancement Cell (QEC), Khawaja Fareed University of Engineering and Information Technology, Rahim Yar Khan, Pakistan

2. Training Workshop for "**NAEAC Program Evaluators"** held on November 23, 2023 organized by National Agriculture Education Accreditation Council, HEC, Islamabad at Bahauddin Zakariya University, Multan, Pakistan
3. Two days hands on Training Workshop on "**Mushroom Cultivation & Spawn Production"** held on June 12-13, 2023 organized by Department of Plant Pathology, University of Poonch, Rawalakot, Pakistan
4. Training Workshop on **"Begin to Lead"** held on January 30, 2020 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan.
5. Training Workshop on " **Entrepreneurship: A silver bullet for Personal Growth and Development**" held on October 24, 2018 at Institute of Social Sciences (ISS), Bahauddin Zakariya University, Multan, Pakistan.
6. One day training workshop on "**Women Entrepreneurship Program 2018**" held on May 04, 2018 at University of Agriculture, Faisalabad, Pakistan.
7. Training Workshop on **"Discover yourself and your student"** held on January 23, 2018 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan.
8. Training Workshop on "**Professional Development for Teachers teaching through Medium of English**" under Transforming English Language Skills held on May 02-06, 2017. Jointly organized by Higher Education Commission, Islamabad and Muhammad Nawaz Sharif University of Agriculture, Multan, Pakistan
9. Research Workshop on **" Online Literature Searching Techniques**" held on April 28, 2017 at Department of Economics, The Women University, Multan, Pakistan
10. Training Workshop on " **Partial Least Square Structural Equation Modeling (PLS-SEM) Using Smart PLS**" held on April 21, 2017 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan.
11. Training Workshop on "The **Art of Facilitation**" held on May 19, 2016 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan.
12. Training Workshop on **"Discover yourself and others"** May, 06, 2016 at Department of Agronomy, BZU, Multan.
13. One month training under Punjab govt. for "more wheat grow campaign.
14. Training on sustainable agriculture at the University of Agriculture, Faisalabad in 2010.

Other Professional skills:

1. One day participation in conference on the topic 6th young leader summit in 2012
2. Organizer of 'All Faisalabad shining stars competition' in 2011.
3. Organizing one day provisional competition at federal Urdu university Islamabad

4. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

- A proven track record of high value.
- Competency with Microsoft office, Outlook and geranial software tools.
- A self-motivated, go-and-get approach and the will to win
- Presence public Relations, conduction *Research* and analysis.
- Establishing relationship with new comers/visitors.
- Mental alertness with high level of creativity.
- Fish farming and rural development.
- Maintaining Communication/ interpersonal Skills.
- Ability to learn and take up challenge.
- Ability to complete given tasks on time.
- Have Win Writing Competition from school level to University level.
- Have skill to hold and run Leading Org.
- Can win any Task.

Conferences:

Conferences Attended

1. National Stakeholders conference on "**Food Value Addition Sector & Its Impact on Economic Growth of Pakistan**" held on May 09, 2024 at Department of Food Science and Technology, Faculty of Food Sciences and Nutrition, B.Z. University, Multan.
2. 8th international conference on "**Global Halal Food Industry: Insights from Pakistan**" held on April 24-25, 2024 jointly organized by Institute of Islamic Studies, Islamic Research Centre and Faculty of Food Sciences and Nutrition, B.Z. University, Multan in collaboration with PHEC, Lahore & Islamic Research Institute, International Islamic University, Islamabad.
3. 5th conference of Asian Allelopathy Society for Allelopathy Research in Asia on "**Allelopathy for Sustainable Ecosystem**" held on January 16-17, 2024 at Institute of Agronomy, Faculty of Agricultural Sciences and Technology, B.Z. University, Multan.
4. 3rd international conference on "**Smart Plant Protection"** held on January 03-04, 2023 at Institute of Plant Protection, MNS University of Agriculture, Multan.
5. International conference on "**Business & Commerce**" held on November 14-16, 2023 at Halley College of Commerce, University of the Punjab, Lahore.
6. 8th international conference of Pakistan Phytopathological Society on "**Sustainable Agriculture & Food Security; A nexus of Plant Pathogens, Climate Change and water Challenges"** held on November 26-28, 2023 at Department of Plant Pathology, Faculty of Agriculture & Environment, The Islamia University of Bahawalpur, Bahawalpur.
7. One day National Seminar on "**Mango Nutrition: Issues and Solutions"** held on July 04, 2023 at Department of Soil Science, B.Z. University, Multan.

8. Forman International Conference on "**Business & Innovation 2023, (FICBI'23)"** at School of Management, Forman Christian College, Lahore
9. 32nd conference of Pakistan Society of Food Scientists and Technologists (PSFST) on "**Food Crises in Pakistan; Opportunities & Solutions"** held on March 08-09, 2023 organized by Faculty of Food Sciences and Nutrition, B.Z. University, Multan.
10. 7th international conference on "**Banking, Insurance & Business Management"** held on December 08-09, 2022 at CBIBM, Hailey College of Banking & Finance, University of the Punjab, Lahore
11. 9th national Agri Tourism Conference on "**Agri-Tourism Business Development Idea, Challenges & Entrepreneurship opportunity for Agricultural and Rural Development**" held on November 24, 2022 at College of Agriculture BZU Sub Campus Layyah, organized by Layyah Women Chamber of Commerce and Industry.
12. National Seminar on "**Modern Seed Enhancement Technologies For Better Crop Performance**: held on October 25, 2022 at College of Agriculture BZU Sub Campus Layyah.
13. International Seminar on "**Efficient Carrier's For Microbial Bio products**" held on September 07, 2022 at Institute of Soil Science, PMAS-Arid Agriculture University Rawalpindi Pakistan **and** Pilot Project for Data Driven Smart Decision Platform for Increased Agriculture Productivity (DDSDP).
14. International conference on "**Climate Smart Agriculture: Innovations and Adaptations"** held on June 15-17, 2022 at Faculty of Agriculture, University of Poonch Rawalakot.
15. 1st international Conference on "**Recent Approaches in Plant Sciences (RAPS-2022)**" held on March 30-31, 2022 at Department of Botany, University of Education, Lahore, Pakistan
16. One day seminar on "**Interview Skills**" organized by Department of Agronomy, Faculty of Agricultural Sciences and Technology, BZU, Multan on March 30, 2022
17. International congress of soil science on "**Soil Health and Sustainable Development Goals**" held on March 09-11, 2022 at University of Agriculture Faisalabad, Pakistan.
18. National conference on "**Soil Degradation: An Alarming Threat to Food Security & Environment**" held on March 03-04, 2022 at Department of Soil Science, Faculty of Agricultural Sciences and Technology, BZU, Multan
19. International Webinar on "**Spate irrigated Agriculture, Potential, Challenges and Way Forward**: organized by Department of Agronomy, MNS-University of Agriculture, Multan-Pakistan on December 31-2021 **Oral Presentation**

20. One day seminar on " **Social Responsibilities and Islam**" held on December, 2021 at Bahauddin Zakariya University, Multan
21. 7th international conference of Pakistan Phytopathological Society on "**Phytopathology: Current Scenario and Future Prospects; a Focused Strategy for Food Safety and Security**" held on November 21-23, 2021 at Department of Plant Pathology, University of Agriculture, Faisalabad and Ayub Agriculture Research Institute, Faisalabad. **Oral Presentation**
22. National Webinar on "**Development of Biopesticide Technology & Future Crop Protection**" organized by G.C. Women University Sialkot & Bahauddin Zakariya University Multan in association with Pakistan Phytopathological Society held on August 27,2021
23. 2nd International Conference on "**Advances in Materials Sciences**" held online on October 05-06, 2021, at Department of Physics, University of Education, Lahore-Pakistan.
24. National Workshop on "**Research Project formulation and national/international research funding opportunities**" held on September 21, 2021 organized by University of Haripur, Pakistan.
25. National Webinar on "**One Health Approaches to Managing Crop Diseases in Rural Villages**" organized by Plant Disease Clinic, Bahauddin Zakariya University Multan in association with Pakistan Phytopathological Society held on September 16,2021.
26. National Webinar on "**Preparing a Successful Manuscript for Submission to a Refereed Journal"** organized by Bahauddin Zakariya University Multan in association with Pakistan Phytopathological Society held on September 08,2021.
27. International Webinar on "**Prospects and Challenges of Organic Agriculture**: organized by Department of Agronomy, MNS-University of Agriculture, Multan Pakistan on July 31-2021. **Oral Presentation**
28. One day PASTIC-UAF-ICT EXPO "**Innovative Trends in Science & Education**" held on February 20, 2019. Jointly organized by Pakistan Scientific & Technological Information Centre (PASTIC) and University of Agriculture, Faisalabad (UAF) at Exhibition Centre, UAF.
29. Three days "**International Horticulture conference Pakistan 2019**" held on February 26-28, 2019 at Department of Horticulture, Bahauddin Zakariya University, Multan.
30. One day training workshop on "**Women Entrepreneurship Program 2018**" held on May 04, 2018 at University of Agriculture, Faisalabad, Pakistan.

31. One week celebrations of "**World Space Week-2018**" held on October 04-10, 2018. Jointly organized by University of Agriculture, Faisalabad (UAF) and Pakistan Space & Upper Atmosphere Research Commission (SUPARCO), Lahore at University of Agriculture, Faisalabad.
32. Two days innovation event "**All Pakistan DICE AFS-2018 Agriculture & Food Science**" held on October 03-04, 2018 at University of Agriculture, Faisalabad, Pakistan.
33. One week celebrations of space education and awareness program on "**World Space Week-2018"** held on 2nd week of October, 2018 at Pakistan Space & Upper Atmosphere Research Commission (SUPARCO), Lahore.
34. One day PASTIC-UAF ICT Expo on "**Innovative trends in Science & Education**" held on February 20, 2018. Jointly organized by Pakistan Scientific & Technological Information Centre (PASTIC) and University of Agriculture, Faisalabad (UAF) at Exhibition Centre, UAF.
35. 2nd Sino-Pak International Conference on "**Innovations in Cotton Breeding & Biotechnology**" held on November 26-27, 2018 at Department of Plant Breeding & Genetics, Bahauddin Zakariya University, Multan and MNS-University of Agriculture, Multan.
36. Awareness Seminar on "**Technology Development Fund (TDF)**" held on May 15, 2018 at Institute of Management Sciences (IMS Hall) BZU, Multan.
37. 1st International and 2nd National Conference on "Challenges and Opportunities to Boost Agriculture in Changing Climate" held on March 26-28, 2018 at College of Agriculture, BZU Bahaddur Sub-Campus Layyah, Pakistan **(Oral Presentation)**
38. International Conference on **"Climate Change Threats to Agriculture and Food Security"** held on Nov. 22-24, 2017 at Department of Agronomy & Climate change centre, The University of Agriculture, Peshawar, Pakistan
39. 6th International conference on "Plant **Health for Sustainable Agriculture**" A focused approach for food security under changing climate held on November 20-22, 2017 at Department of Plant Pathology, Bahauddin Zakariya University & Central Cotton Research Institute, Multan, Pakistan.
40. A seminar on " System App for Sustainable Development Goals" held on May 08, 2017 at Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan (**Organizer**)
41. International Conference on **"Climate Change and Biodiversity (IC^3B)"** held on May 2-4, 2017 at Cholistan Institute of Desert Studies (CIDS), The Islamia University of Bahawalpur Pakistan.

42. A Research workshop on "**Literature Review Made Easy**" April 03, 2017. Jointly organized by Research Centre for Academic & Professional Development and Department of psychology, BZU, Multan, Pakistan.
43. National conference on "**Challenges and Opportunities to Boost Agriculture in Changing Climate''** March 29-30, 2017. Department of Agronomy, Bahadur Sub Campus Layyah, BZU, Multan. (**Oral presentation**)
44. A seminar on "**Wheat Production Challenges in Pakistan Under Changing Climate**" March 07, 2017. Department of Agronomy, Bahauddin Zakariya University, Multan, Pakistan. (**Organizer**)
45. International conference on "**SAFE FOOD FOR ALL & FOOD EXPO**" March 2-3, 2017. Institute of Food Science & Nutrition, Bahauddin Zakariya University, Multan, Pakistan. (**Poster presentation**)
46. International conference on malnutrition "**MALNUTRITION KILLS**! Can we see the writing on the wall?" August, 2016, Institute of Food Science & Nutrition, Bahauddin Zakariya University, Multan, Pakistan.
47. A seminar on "**Sustainable agriculture in arid climate**" May, 12, 2016. College of Agriculture, BZU, Bahadur Sub Campus, Layyah.
1. National conference on "**Sustainable production of pulses, a situation analysis**" Aug 11, 2015 organized by Department of Agronomy, Bahadur Sub Campus Layyah, BZU, Multan.
2. International Conference on **"Crop Management in changing climate"** Feb 11-13, jointly organized by Departments of Agronomy, Crop Physiology and Botany, University of Agriculture, Faisalabad.
3. International Conference on Allelopathy, **Allelopathy: a multifaceted process**, Dec, 14-18, 2012, department of Botany, Panjab University, Chandigarh, India.
4. A seminar on **"Direct seeded rice; developments & future strategies"** June 09, 2012, old senate Hall, University of Agriculture, Faisalabad.
5. A seminar on **"Moringa benefits for human health"** February 18, 2012 in New Senate Hall, University of Agriculture Faisalabad.
6. A lecture on **"Development of Salt-Resistant Maize Hybrids and their Potential Use in Pakistan"**, 22 November 2011, New Senate Hall, University of Agriculture Faisalabad.
7. A seminar on **"Climate Change, food security in Pakistan Scenario",** by Pakistan Agriculture Scientists Forum" March 16, 2011, University of Agriculture, Faisalabad-Pakistan.

8. International Seminar on **"Vision for Pakistan's Agriculture: Challenges and options"** March 16, 2011, University of Agriculture, Faisalabad-Pakistan.
9. **A workshop on Edible Oilseed Crops; threats and challenges from production to consumption.** August 04, 2010. Department of Agronomy and Pakistan Society of Agronomy, University of Agriculture, Faisalabad-Pakistan.
10. **National conference on Pakistan agriculture: Challenges and opportunities.** July 29-31, 2010 —Pakistan Agricultural Scientist Forum (PAS Forum).
11. **International science conference on utilization of modern agriculture technology in changing environmental perspectives.** July 21-23, 2010 – Faculty of Agriculture, University of Azad Jammu and Kashmir, Pakistan.
12. **International Conference on Sustainable Food Grain Production: Challenges and Opportunities**, October 26-27, 2009 at University of Agriculture, Faisalabad, Pakistan.

Languages:

Language	Reading	Writing	Speaking
English	excellent	excellent	excellent
Urdu	excellent	excellent	excellent
Punjabi	Good	Fair	excellent
Saraiki	Fair	Fair	Good

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.
Date: 13-09-2024
Full name of authorized representative: **Dr. Shabir Hussain**