CURRICULUM VITAE

1.	**Full name:**	***Ejaz Ahmad Waraich***
2.	**Father's name:**	Ch. Lal Khan
3.	**Date of birth:**	April 15, 1973
4.	**Place of birth:**	Gujranwala, Punjab, Pakistan
5.	**Gender:**	Male
6.	**Marital status:**	Married
7.	**C.N.I.C. No.:**	34101-2473481-9
8. &	**Permanent address:**	Bakhray wali Khurid P.O. Bakhray Wali Kalan Tehsil District Gujranwala, Punjab, Pakistan.
9.	**Mailing address:**	Dept. of Agronomy, University of Agriculture, Faisalabad, Punjab, Pakistan Tel: 92-0336-6553081. Fax: 92-041-9200764 (attentions Ejaz Ahmad Waraich) E-mail: uaf_ewarraich@yahoo.com

10. Education:

Name of Institution	**Degree/Certificate**	**Major Subjects**	**Year attained**	**Grade/ Division**
University of Adelaide Australia	Endeavour Executive Fellowship	Soil Ecology	June 2015- October 2015	
University of Western Australia	Endeavour Research Fellowship (Post – Doctorate)	Plant Nutrition	March 2011 – August 2011	
University of Manitoba, Winnipeg, Canada	Post – Doctorate	Plant Molecular Biology	Sept.2008 - Sept.2009	
University of Agriculture, Faisalabad	PhD	Agronomy	2006	4.00/4.00
University of Agriculture, Faisalabad	M.Sc. (Hons.) Agriculture	Agronomy	2001	CGPA: 3.82/4.00
University of Agriculture, Faisalabad	B.Sc. (Hons.) Agriculture	Agronomy	1999	CGPA: 3.86/4.00
Govt. College Gujranwala	F.Sc.	Pre-medical	1991	Ist
Govt. P.B. Model High School, Gujranwala.	Matriculation	Science group	1989	Ist

11. References:

1. Professor Dr. Rashid Ahmad, Supervisor of Ph.D studies, Department of Agronomy, University of Agriculture, Faisalabad, Pakistan.
   Email: uaf_rashid@yahoo.com

2. Dr. Zed Rengel. School of Earth and Environment, The University of Western Australia (M087), 35 Stirling Highway,CRAWLEY WA 6009,Australia
   E.mail: zed.rengel@uwa.edu.au

3. Dr Ann McNeill. School of Agriculture, Food and Wine, The University of Adelaide, South Australia, Wait Campus,SA 5005.
   E.Mail: ann.mcneill@adelaide.edu.au

12. Special Trainings Received

Field of training	Name of the Institution	Duration
Research Orientation Program on Research Methodology and analytical Techniques	University of Agriculture, Faisalabad	2 Weeks
Scientific research and report writing	University of Agriculture, Faisalabad	1 Week
Statistica	University of Agriculture, Faisalabad	1 Week
Effective Teaching	Department of Education and Extension, University of Agriculture, Faisalabad	4 Weeks
R-Programming	A short-term training Programme on "An introduction to R-Programming language for statistical computing" Organized by Department of Mathematics & statistics, University of Agriculture, Faisalabad.	4 Weeks
Adaptation to drought	A short-term training organized by University of Western Australia & Murdoch University From 27th – 31st August 2013.	1 week

13. Additional Skills:

a. Computer Skills

Fair expertise with computer environment and computer softwares such as Word Processing (MS Word and Word Perfect) Spread sheets (MS Excel), Presentation (MS Power Point) and Statistical (SAS and MSTAT).

b. Languages and Degree of Proficiency

Language	Read	Write	Speak
English	Good	Good	Good
Urdu	Excellent	Excellent	Very Good
Punjabi	Good	Fair	Excellent
Arabic	Good	Good	Fair

14. Honors and Awards:

- Won Endeavour Executive award 2015 from Govt. of Australia.
- Won Research productivity award 2013-14 from Pakistan Council for Science and Technology
- Won NARS young scientist award for a short-term training on "Adaptation to drought" and interdrought VI conference organized by University of Western Australia & Murdoch University From 26th August – 6th September 2013.
- Won Research productivity award 2012-13 from Pakistan Council for Science and Technology.
- Won Research productivity award 2011-12 from Pakistan Council for Science and Technology.
- Won Endeavour Research Fellowship award-2011 from the Govt. of Australia.
- Won international award of the best paper of the conference in the TOPIC 1: Hydrology and Water Resource in 14th International Water Technology Conference 2010. CAIRO, EGYPT, March 21-23, 2010, by His Royal Highness PRINCE SULTAN BIN ABUDULAZIZ.
- First position in the department in M.Sc. (Hons) Crop Physiology.
- Second Position in department in B.Sc. (Hons) Agronomy.
- Ph.D merit scholarship awarded by HEC, Ministry of science and technology Govt. of Pakistan.
- Won Merit scholarship for two years in M.Sc. (Hons) Agriculture.
- Won Merit scholarship for four years in B.Sc. (Hons) Agriculture.
- Won Star laureate award 2007 from south Asian Publications.
- Won HEC Post-doc fellowship award 2008-09.
- Letter of appreciation from the Vice-Chancellor, on Independence Day Celebrations-2001, University of Agriculture, Faisalabad.
- Develop new technique (Raised bed) for enhancing water use efficiency in wheat.
- First division throughout the academic career
- Certificate of Best English speaker in 1989.
- Certificate of best cricket Player.

15. Professional Experience:

Institution	**Post/designation**	**Description**	**From**	**To**
University of Agriculture, Faisalabad, Pakistan	Associate Professor (Regular)	Teaching and Research in the field of Agronomy/ Crop Physiology	30-8-2019	To date
University of Agriculture, Faisalabad, Pakistan	Assistant Professor (Regular)	Teaching and Research in the field of Crop Physiology	11-8-2008	30-08-2019
University of Agriculture, Faisalabad, Pakistan	Assistant Professor (Adhoc)	Teaching and Research in the field of Crop Physiology	6-11-2006	10-08-2008
University of Agriculture, Faisalabad, Pakistan	Lecturer (Regular)	Teaching and Research in the field of Crop Physiology	2003	2006
University of Agriculture, Faisalabad, Pakistan	Lecturer (on contract basis)	Teaching and Research in the field of Crop Physiology	2000	2003

Administrative/Co-Curricular Experience:

1. Working as a Paper setter/ Examiner of Ph.D comprehensive Examination from 2007 to date. — 2007 to date
2. Working as a committee member of improvement of postgraduate student's layout plans in the department of Agronomy. — 2015 to date
3. Working as a committee member of scrutiny committee of postgraduate student's Synopsis in the department of Agronomy. — 2015 to date
4. Working as a committee member of oral evaluation committee for the internship programme of B.Sc. (Hons) agri. 8th semester, major Agronomy. — 2015 to date
5. Working as incharge Stress physiology laboratory, Department of Crop Physiology, University of Agriculture, Faisalabad. — 2007 to date
6. Worked as a Director Graduate Studies, University of Agriculture, Faisalabad. — 2019-2021
7. Worked as protocol officer to Vice Chancellor, University of Agriculture, Faisalabad. — 2007 - 2008
8. Worked as a member of equivalence committee, University — 2019-20

of Agriculture, Faisalabad.

9. Worked as a member of the committee to look into the matter and to make arrangements for allotment of suitable rooms/space at main campus to the faculty members of UAF sub-campuses for supervising the research of the students. 2020

10. Worked as a member of the committee to develop Standard Operative Procedures (SOPs) for conducting Thesis Research in the Research Institutes other than UAF. 2019-2021

11. Worked as a member of the committee to resolve the issue of DVM students and make recommendations regarding "Scheme of studies" (old and new). 2020

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12. Worked as a member of scrutiny committee of applications of the candidates for FAFU Scholarships. 2020

13. Worked as a member of the committee to thrash out the matter regarding the issuance of re-admission notification of spring semester 2018-19 (Ex-post Facto). 2020

14. Worked as a committee member to conduct entry test for admission to undergraduate and post graduate program for the academic session 2020-21. 2020

15. Worked as a member of the committee to thrash out the SOPs devised by specialized health care and medical education department, Higher education department and School Education Department. 2020

16. Worked as a Member of the committee of stakeholders to prepare key performance indicators and targets for 2020-21 – 2022-23. 2020

17. Worked as a convener of the committee, constituted by the syndicate, 2020

for Mr. Umar Maqsood, Department of Food Engineering.

18. Worked as a member of the institutional Scholarship award committee (ISAC) for the Punjab Educational Endowment Fund Scholarship. 2020

19. Worked as a member of "conflict of interest committee" for drafting a comprehensive policy for approval of statutory bodies. 2020

20. Worked as a member of the committee to thrash admission of M.Phil. Human Nutrition and Dietetics and take out justifiable solution to give space to UAF graduates for admission in M.Phil. Human Nutrition and Dietetics. 2020

21. Member of the committee to thrash out the HEC policy on Ph.D. degree programs. 2021

22. Worked as a committee member of technical. scrutiny in the international workshop on "Biofortification of staple crop: A solution to combat Malnutrition" from March 29-31, 2015

23. Organized trainings of students, Farmers and field assistants in Districts Sargodha, Okara and Sheikhupura, how to produce more vegetables under changing climatic conditions 2013-2016

24. Organized an international Seminar on "Heat Stress alleviation in summer vegetables- enhancing the use of genetic diversity in central Punjab Pakistan" and "Nuflora-A University of Sydney Company (Public-Private Partnership). June 2014

25. Organized an international workshop on "Vegetable seed production" as a Co-Project leader Funded by ACIAR project at University of Agriculture, Faisalabad. Dec. 2015

26. Worked as course coordinator, C. Phy.101 2012-April 2013 Department of Crop Physiology, University of Agriculture, Faisalabad.

27. Worked as member of the advisory board of

"The Agrarian Society" 2007
University of Agriculture, Faisalabad.

28. Worked as a member of registration committee, for 2006
International symposium on "Sustainable
Agriculture and integrated crop improvement"
14 th-16th September 2006. UAF, Faisalabad

29. Worked as a member of Exhibition committee,
for international symposium on
"Sustainable Agriculture and integrated crop improvement" 2006
14 th -16 th sept.2006. Faculty of Agriculture, University of
Agriculture, Faisalabad.

30. Worked as Assistant Superintendents of various Hostels (2000-2006)
For 6 years Univ. of Agri. Faisalabad, Pakistan.

31. Worked as a manager of Research Farm (2000-2006)
for 8 years, Dept. of Crop Physiology (2010-2012)
Univ. of Agri. Faisalabad, Pakistan

32. Worked a member, Faculty Board, Faculty of Agriculture 2006 to 2015
Univ. of Agri. Faisalabad, Pakistan.

33. Worked as a member of Accommodation Committee, 2004
"International Workshop on Cotton" Faculty of Agriculture,
University of Agriculture, Faisalabad.

34. Worked as a President, Society of Crop Physiology, 4 years, (2000-2004)
Faculty of Agriculture, University of Agriculture, Faisalabad.

35. Worked as a member of the Committee, for the maintenance 2004.
of law and order, University of Agriculture, Faisalabad.

17. Professional Activities

a. Memberships in professional and scholarly organizations

- Member Pakistan Society for Horticultural Science from 2021
- Member Soil Science Society of Pakistan from 1999- to date
- Member of Pakistan society of Agronomy from 1999- to date
- Worked as Team member of QEC self-assessment team of Dept. of Crop Physiology
- Worked as a member, Faculty Board, Faculty of Agriculture Univ. of Agri. Faisalabad, Pakistan.
- Worked as Secretary board of studies in the department of Crop Physiology, University of Agriculture.
- Worked as Member of advisory board "The Agrarian Society" Faculty of Agriculture, University of Agriculture, Faisalabad

b. Participation in colloquia, seminars, conferences, workshops etc.

February 2000	Seminar on "Environmental Pollution and Forestry" University of Agriculture, Faisalabad
February 2000	Seminar on "Chemical Control of Weeds" organized by Cyanamid Pakistan Ltd. at University of Agriculture, Faisalabad
March 2000	Seminar on "Land Resources of Pakistan and our Priorities" University of Agriculture, Faisalabad
March 2000	Special Lecture by N.A. Borlauge at University of Agriculture, Faisalabad
March 2000	National Food Security Workshop, University of Agriculture, Faisalabad
April 2000	Seminar on Global Marketing; Opportunities and Challenges, University of Agriculture, Faisalabad
May 2000	Special lecture on "Role of Agricultural Business in Pakistan's Economy", University of Agriculture, Faisalabad
June 2000	Seminar on "2000-Environment Millennium, time to act" University of Agriculture, Faisalabad
March 2001	21st Pakistan Congress of Zoology, University of Agriculture, Faisalabad
April 2001	Special Lecture "Global Warming and Water Crises", University of Agriculture, Faisalabad
April 2001	2nd National Seminar on Drainage in Pakistan, University of Agriculture, Faisalabad Pakistan
April 2001	Seminar on World Trade Organization (WTO) Agreements: Impacts on Pakistan Agriculture, University of Agriculture, Faisalabad Pakistan
August 2001	Seminar on Preventing Narcotics in Pakistan, University of Agriculture, Faisalabad Pakistan
October 2001	Seminar on Deregulation on Agricultural Prices, University of Agriculture, Faisalabad Pakistan
December 16-21,2002	Seminar on Afforestation and sustainable Forest Management organized By Asian Productivity Organization (APO, Japan), University of Agriculture, Faisalabad, Pakistan
December 25-28, 2002	33rd All Pakistan Science Conference, University of Agriculture, Faisalabad, Pakistan
June, 2003	Water: Two Billion People dying for it. A seminar held at UAF on World Water Day
June 2003	Metals in used water: Challenge to agriculture and their local management, University of Agriculture, Faisalabad, Pakistan
July 2003	WTO and Quality Control Standardization, Seminar organized by Faculty of Agricultural Economics and Rural Sociology, University of Agriculture, Faisalabad, Pakistan
October 2003	Future of Punjab Agriculture, A seminar held at UAF on 53 rd Alumni Meet
April 2004	A seminar held on World water Day at University of Agriculture, Faisalabad, Pakistan
April, 2004	International workshop on Citriculture, organized by Institute of Horticultural Sciences, UAF
June 2005	Challenges to Food Industry in the WTO Scenario, A seminar held at UAF
December 2005	Water For Ever, Water for All. A seminar organized by Faculty of Agricultural Engineering and Technology, UAF
February 2006	Seminar on application of Molecular Markers in Plant Breeding. Held in CABB, Department of PBG, UAF
March 2006	International Symposium on Agriculture in 21st Century- Challenges and Strategies

May 2006	National Seminar on Soil Care for Sustainable Environment. Organized by The institute of Soil and environmental Sciences, University of Agriculture, Faisalabad
May 2006	Seminar on Biodiversity Day, organized by Department of Agri Entomology, University of Agriculture, Faisalabad, Pakistan
Sept.2006	International symposium on "Sustainable agriculture and integrated crop improvement" Faculty of Agriculture, University of Agriculture, Faisalabad
March. 2007	International symposium on "Prospects of Horticultural industry in Pakistan" Faculty of Agriculture, University of Agriculture, Faisalabad
March 18-21. 2007	International Workshop on Allelopathy "Current Trends & Future applications" Faculty of Agriculture, University of Agriculture, Faisalabad
April 2007	A national workshop on "Development of indigenous resources- The Sahiwal cattle Breed.
12-10-08	"Plant Bioterrorism myth or reality "Department of Plant Science, University of Manitoba, Winnipeg, Canada.
16-10-08	Regulation of plant embryo development *in vitro*.Department of Plant Science, University of Manitoba, Winnipeg, Canada.
5-11-2008	Functional genomics of the AP2 Transcription factor Family in cereals. Department of Plant Science, University of Manitoba, Winnipeg, Canada
13-11-2008	Of soil and Nematodes in search of productivity sustainability and health. Department of Plant Science, University of Manitoba, Winnipeg, Canada
19-11-2008	Market efficiency in western Canadian Canola Market.Department of Agribusiness and Agricultural Economics. University of Manitoba, Winnipeg, Canada
27-11-2008	The role of ABC transporters in cuticular lipid secretion and formation of plant cuticle. Department of Plant Science, University of Manitoba, Winnipeg, Canada
04-12-2008	Canadian Malting Barley "Research on mearsuring and improving quality"Department of Plant Science, University of Manitoba, Winnipeg, Canada
15-01-2009	Looking for Phosphopeptides in Fusarium graminearum.Agriculture and Agrifood Canada, Winnipeg.
21-01-2009	Managing Phosphorus for environmental and agronomic sustainability.Department of Soil Science,University of Mnitoba, Winnipeg ,Canada.
29-01-2009	Development of Molecular Marker for Pyramiding crown rust gene in Oat. Department of Plant Science, University of Manitoba, Winnipeg, Canada.
19-02-2009	Cutting to the chase: Laser capture microdisection of the Arabidopsis seeds.Department of Plant Science, University of Manitoba, Winnipeg, Canada.

05-03-2009	Transferring scotina resistance to Brassica naps.Department of Plant Science, University of Manitoba, Winnipeg, Canada.
12-03-2009	BoGSL-ELONG gene silenced by RNAi involved in reduction and induction of glucosinolates in Brassica naps.Department of Plant Science, University of Manitoba, Winnipeg, Canada.
18-03-09	Nutritional Immunology: Implications in animal production, walfare and food safety.Department of animal science, Faculty of Agricultural and Food Science, University of Manitoba, Canada.
21-23 March,2010	14th International water technology conference, Cairo, Egypt.
18th April, 2011	Phototropin LOV domains - serving many organisms to detect blue light signals, by Emeritus Professor Winslow Briggs, from Carnegie Institution for Science, Stanford. Organized by UWA.
27th April, 2011	"Aus2K symposium on recent paleoclimate science' Climate Change Symposium" organized by School of Business, UWA.
6th May, 2011	Effects of climate change on coupled water-vegetation dynamics in drylands – a simulation study By Dr. Britta Tietjen from the Potsdam Institute for Climate Impact Research, Germany delivered at UWA
10th May 2011	Quantifying Nitrogen Fixation of *Acacia mangium* Wild. Plantations Grown at Different Levels of Phosphorus in Lematang, Sumatra. Organized by School of Plant Biology, UWA
17th May, 2011	A seminar "Sharing my experience as Editor in Chief of Plant and Soil – stories that could fill a book" By Prof. Dr. Hans Lambers, organized by the Australian Society of Soil Science at UWA.
24th May 2011	*Arabidopsis thaliana* cell cultures are a good model to understand how plants react to phosphate deficiency and phosphite treatment. By Fazila A Mannan, School of Plant Biology, UWA
30th May 2011	Cereal yields are decreased by sub-soil salinity on a sodic soil under dry conditions. By Prof Ed Barrett-Lennard from the Centre for Eco hydrology, School of Plant Biology, UWA
2nd June 2011	"Australia in the global response to climate change" organized by School Social Sciences, UWA.

January,7.2012	National seminar on "Role of Agronomy in national food security" held at Ayub Agricultural Research Institute, Faisalabad, Pakistan.
12-15 March-2012	14th Congress of Soil Science, Lahore- Pakistan. 12-15 March 2012.
06-07 Nov.2012	International Symposium on use of Potassium in Pakistan organized by soil science society of Pakistan, Serina Hotel, Faisalabad, Pakistan.
January,14.2013	A seminar on "Remote sensing for monitoring agricultural crops and assessing soil salinity" organized by Saline Agriculture Research Centre, Institute of soil and environmental sciences, University of Agriculture, Faisalabad, Pakistan.
January, 23.2013	A one-day virtual online workshop on "Scientific Writing" held on 23rd January, organized by the L.E.J National science information Centre, under the Virtual Education Project Pakistan.
April,11-12, .2013.	International conference "Sustainable Crop Productivity; Threats and Options" organized by Pakistan Society of Agronomy, April 11-12, 2013.
June,4-6.2013	Ag-MIP-Pakistan kickoff Workshop & International Seminar on Climate Change. University of Agriculture, Faisalabad, Pakistan.
24thMay-14th June.2013	A short-term training Programme on "An introduction to R-Programming language for statistical computing" Organized by Department of Mathematics & statistics, University of Agriculture, Faisalabad.
2-6th September-2013	Interdrought- IV Conference, Crown Perth, Western Australia.
12th September-2013	Farmer capacity building initiative, joint seminar/farmer day at Okara.
3rd- 4th October-2013	International Workshop on Seed Physiology, Production and Management
24th October-2013	National seminar on "Cultivation of non-traditional crops in Pakistan: Prospective and limitations". organized by Pakistan society of Agronomy at AARI, Faisalabad.
25th October-2013	International seminar on "Climate change and food security: Policy issues" organized by ORIC, University of Agriculture, Faisalabad.
24th -27th February-2014	"More for less- Linkage to enhance livelihoods" a workshop organized by Australian Institute for sustainable communities, Faculty of ESTem, University of Canberra, at Pearl Continental Bhurban.
10th March-2014	"STEVIA" A farmer day organized by Ayub Agriculture Research Institute, Faisalabad.
22nd March-2014	A one-day seminar on "World Water Day & Water Energy" organised by Water Management Research Centre and Department of Irrigation and Drainage, University of Agriculture, Faisalabad
24-27th March-2014	Workshop on biochar in Pakistan: opportunities and potential organized by University of Agriculture Faisalabad, Pakistan and University of Edinburgh, UK.
26th March-2014	An international seminar on "Heat stress alleviation in summer vegetables-enhancing the use of genetic diversity in central Punjab-Pakistan" and Nuflora - A University of Sydney company (Public Private Partnership organized by Institute of Horticulture, University of Agriculture, Faisalabad.
2nd June-2014	Training workshop on capacity building in "Technical proposal writing for PARC-ALP grants" organized by Pakistan Agricultural Research Counsil (PARC) in collaboration with ORIC,UAF

5th June-2014	WORLD ENVIRONMENT DAY, One day Public awareness seminar on "Environmental Challenges" organized by Institute of soil and Environmental sciences,UAF.
7th june-2014	Workshop on "Capacity building in seed technology" organized by University of Agriculture, Faisalabad
March (29-31) 2015	*International workshop on* ***Biofortification of staple crops****: a solution to combate malnutrition.* Organized by Department of Agronomy University of Agriculture,Faisalabad-Pakistan.
April 1st -2015	A seminar on "***Integrated value chain approach to deliver quality mangoes to markets***" ASLP-II. Organized by institute of Bussiness management Sciences (IBMS) & Institute of Horticultural scienecs, UAF
September 20th- 24	Attended 17th Australian Agronomy conference held in Wrest point, Hobart, Tasmania, Australia from September 20 -24, 2015
November 16th, 2015	International conference on "Soil sustainability for food security" organized by Institute of soil & environmental sciences. University of Agriculture, Faisalabad.
November 16th, 2015	International seminar on "Risk management on Agriculture" Organized by Lead Principal Investigator, AgMIP- Pakistan.
November 29th, 2015	International workshop on "Current status of fertilizer use in Pakistan" Organized by project coordinator, Institute of soil & environmental sciences. University of Agriculture, Faisalabad.
December 8-10th, 2015	Ist Pakistan seed congress, Organized by Director ORIC. University of Agriculture, Faisalabad.
December 11th, 2015	International workshop on "vegetable seed production" Organized by Co-Project leader, ACIAR Funded project, Institute of Horticulture, University of Agriculture, Faisalabad.
April 9th, 2016	Ist Stakeholders Interactive one day workshop "Prospects of new crops in Pakistan" Organized by department of Agronomy, University Agriculture, Faisalabad.
November 4th, 2016	One day seminar on Indus Water Treaty: Potential treats to Pakistan Water Resources. University Agriculture, Faisalabad.
September 17-18, 2018	International conference on "Soyabean: Challenges and opportunities" Organized by Dept. of Agronomy, University of Agriculture, Faisalabad.
October 12th ,2018	One day seminar on "Transformation of cotton production technology according to agro-ecological zones" organized by Dept. of Agronomy, University of Agriculture, Faisalabad.
November23rd 2018	"Carbon sequestration: A rising choice for climate smart agriculture" one day seminar organized by Dept. of Agronomy, University of Agriculture, Faisalabad.
November 30th 2018	"Soil-Plant-Environment nexus in Changing Climate" one day seminar organized by Saline Agriculture Research Centre and Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad.
October 28th, 2019	National seminar on crop management strategies for enhancing farm productivity in Punjab organized by Agronomic Research Institute, AARI, Faisalabad.
October 29th-30th	International conference on "Green Energy Technologies: Opportunities and

,2019	challenges" Organized by UAF, ICDD and HEC.
November 4th ,2020	Awareness seminar on SMOG, organized by Institute of soil and environmental Sciences

18. Teaching and Research Achievements:

a. Teaching (Courses Taught)

- Introduction to Crop Physiology
- General Crop Physiology
- Stress Physiology
- Seed Physiology
- Developmental Physiology of Crop Plants
- Physiology of Drought
- Biological Nitrogen Fixation

b. Research:

Research interests:

- Understanding physiological basis of yield in crop plants
- Understanding physiological basis of stress (drought, salinity and heat) tolerance in plants.
- Identification of physiological and biochemical indicators of stress tolerance in crop plants
- Technologies development for productivity enhancement in field crops facing drought, salinity and heat stresses.

i. Independent research:

a)

Research Projects Submitted/Under progress

S.#	Research project	Funding agency	Position in the project	Status
1	Agro-physiological and biochemical characterization of *Camelina sativa* under water stress.	HEC	PI	Completed
2	Heat stress alleviation in summer vegetables – enhancing the use of genetic diversity in central Punjab, Pakistan.	ACIAR	PI	Completed
3	Enhancement of performance of Direct Seeded rice by seed priming.	HEC	Co-PI	Completed
4	Use of biodegradable super-absorbent polymers in rainfed agriculture for enhancing farm-scale profitability and crop water use efficiency.	PARB	Co-PI	In progress

b) Supervised research (Annex 1)

- As major supervisor (M.Sc. Hons./M.Phil.) 58
- As major Supervisor (Ph.D.) 09
- As member supervisory committee (M.Sc. Hons.) 258
- As member supervisory committee (Ph.D.) 35

c) **Publications**

- **Dissertation** **01**
- **Thesis** **01**
- **Research Articles** **195**
  - Published in HEC Recognized Journals 16
  - Published in International Journals with impact factor 105
  - Books/Book Chapters 19
  - Published in International Journals without impact factor 04
  - Submitted in International Journals 05
- **Popular articles** **12**
- **Abstracts** **32**

LIST OF PUBLICATIONS OF DR. EJAZ AHMAD WARAICH, ASSOCIATE PROFESSOR, DEPARTMENT OF AGRONOMY, UNIVERSITY OF AGRICULTURE, FAISALABAD. PAKISTAN

a. Dissertation: ***Crop management strategies to improve water use efficiency in irrigated wheat (Triticum aestivum L.).*** University of Agriculture, Faisalabad, Pakistan. 2006. (Research work completed under the supervision of Professor Dr. Rashid Ahmad, Dept. of Crop Physiology, University of Agriculture, Faisalabad, Pakistan.)

b Thesis: ***Physiological aspects of source-sink relationship in wheat under different levels of nitrogen*****.** University of Agriculture, Faisalabad, Pakistan. 2001. (Research work completed under the supervision of Professor Dr. Nazir Ahmad, Ex. Chairman Dept. of Crop Physiology, University of Agriculture, Faisalabad, Pakistan.)

International research papers/ publications with impact factor 105

(Total Impact Factor: 212.967)

1. Muhammad Ahmad, Maryium Sajjad, Aman Ullah, Usman Zulfiqar, Sami Ul-Allah, **Ejaz Ahmad Waraich,** Kaleem ul Din, Kadambot H. M. Siddique, Muhammad Farooq. 2025. From Stress to Success: Precision Strategies for Heat Tolerance in Wheat. **Journal of Agronomy and Crop Science:** 211: e70048 DOI: doi.org/10.1111/jac.70048. ***Impact factor: 3.7***

2. Madeeha kauser, **Ejaz Ahmad Waraich**, Hafeez ur Rehman and Muhammad Anwar ul Haq. 2025. Organic and inorganic amendments improved the morpho-physiological and nutritional status of moringa (Moringa oleifera) genotypes. **Acta Physiologiae Plantarum**: 47:39. DOI: doi.org/10.1007/s11738-025-03771-y***. Impact factor:2.4***

3. Malik Muhammad Abdullah, **Ejaz Ahmad Waraich**, Muhammad Ahmad, Saddam Hussain, Hafiz Naeem Asghar, Arslan Haider, Usman Zulfiqar, Zahoor Ahmad, Walid Soufan, PV Vara Prasad & Ivica Djalovic.2025. Improving soybean drought tolerance via silicon-induced changes in growth, physiological, biochemical, and root characteristics. **Plant Signaling & Behavior**:20 (1):1-13. DOI: 10.1080/15592324.2025.2465232. ***Impact Factor: 2.8***

4. Sanam Maqbool, Tahrim Ramzan, Arslan Haider, **Ejaz Ahmad Waraich**, Aleeha Fatima, Manzer H. Siddiqui, Saud Alamri, Abida Parveen, and Hafeez ur Rehman.2025. Impact of Thiourea on Wheat's Morpho-Physiological and Ionic Attributes (Triticum aestivum L.) under Lead Stress: Reducing the Translocation of Lead from Soil to Roots, Shoots, and Grains. **ACS Omega**. *2025*.DOI: 10.1021/acsomega.4c09941. ***Impact factor: 3.7***

5. Bilal Ahmad Shahzad, **Ejaz Ahmad Waraich**, Muhammad Saleem, Saddam Hussain and Saifullah. 2025. Seed priming with silicon ameliorates adverse effects of drought stress in Canola (Brassica napus L.) by improving growth,

water relations and gas exchange attributes. **Soil Environ**. 44(1): DOI:10.25252/SE/2025/253508. ***Impact factor: 0.8***

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3	**Ejaz Ahmad Waraich**, , Zeeshan Ahmed, Rashid Ahmad, M. Shahbaz	2015	Physiological and biochemical attributes of *Camelina sativa* (L.) Crantz under water stress conditions	Proceedings of the 17th Australian Society of Agronomy Conference, 20 – 24 September 2015, Hobart, Australia. Web site www.agronomy2015.com.au
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11. **Waraich, E. A.,** R. Ahmad, A.Ahmad, Anwar-ul-Haq and Saifullah.2008. Raised bed planting - A new technique for enhancing water use efficiency in wheat (*Triticum aestivum* L.) in semi-arid zone. In Abstr. Intl. Symposium on modern approaches and techniques in agriculture to ensure food security in Pakistan. Oct. 13-14, 2008. Faculty of Agriculture, University of Agriculture Faisalabad.

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22. Zahoor, A. E. A.Waraich, R.Ahmad and N. Mahmood. 2013. Effect of foliar application of Potassium Sulphate on cotton (*Gossypium hirsutum* L.) Yield. International conference on crop management in changing climate Feb.11-13, University of agriculture, Faisalabad. Paksitan.

23. Muhammad Adnan Tabassum, Rashid Ahmad, Muhammad Akram, **Ejaz Ahmad Waraich** and Muhammad Shahbaz Naeem. 2013. Physiological evaluation of wheat (*triticum aestivum* l.) for drought tolerance under field and lab conditions. International conference "Sustainable Crop Productivity; Threats and Options" organized by Pakistan Society of Agronomy, April 11-12, .2013.

24. Muhammad Qudrat Ullah Farooqi, Rashid Ahmad, **Ejaz Ahmad Waraich** and Muhammad Shahbaz Naeem. 2013. Effect of supplemental foliar-applied potassium on yield and grain quality of autumn planted maize (*Zea mays* L.) under water stress. International conference "Sustainable Crop Productivity; Threats and Options" organized by Pakistan Society of Agronomy, April 11-12, .2013.

25. Muhammad Haseeb, Rashid Ahmad, **Ejaz Ahmad Waraich** and Muhammad Shahbaz Naeem. 2013. Effect of supplemental foliar-applied nitrogen on growth and achene yield of autumn planted sunflower (Helianthus annuus L.) under water stress at reproductive stage. International conference "Sustainable Crop Productivity; Threats and Options" organized by Pakistan Society of Agronomy, April 11-12, .2013.
26. Shoaib Shaukat, **Ejaz Ahmad Waraich**, Rashid Ahmad and Muhammad Shahbaz Naeem. 2013. Role of kaolin, a reflectent anti-transpirant, on growth, yield and water use efficiency of wheat crop (Triticum aestivum L.) grown under water stress conditions. International conference "Sustainable Crop Productivity; Threats and Options" organized by Pakistan Society of Agronomy, April 11-12, .2013.

27. Usman Khalid, **Ejaz Ahmad Waraich**, Rashid Ahmad and Muhammad Shahbaz Naeem. 2013. Physiological and biochemical responses of wheat (Triticum aestivum L.) to foliar applied phosphorus. International conference "Sustainable Crop Productivity; Threats and Options" organized by Pakistan Society of Agronomy, April 11-12, .2013.

28. Zahoor Ahmad, **Ejaz Ahmad Waraich**, Shazia Anjum, Muhammad Faisal, Muhammad Abdullah, Rashid Ahmad and Sajjad Akhtar.2017. Foliar applied

Salicylic acid enhanced various growth and physiological mechanisms under salt and drought stress in wheat. Proceedings of international conference on sustainable agriculture in Pakistan. Jointly Organized by University of California, Davis, USA and University of Agriculture, Faisalabad.

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30. Zahoor Ahmad, Maria Rasool, Syeda Sadaf Zehra, Muhammad Zia-ur-Rehman, **Ejaz Ahmad Waraich** and Hinnan Khalid .2017. Impact of Foliar Applied Salicylic Acid (SA) on Growth, Water Relations and Chlorophyll Content of Camelina under Water Stress Condition. Proceeding of the Seventh International Conference on Environmentally Sustainable Development, 26-28 August 2017. Organized by Department of Environmental Sciences, CIIT-Abbottabad, Pakistan.

31. Zahoor Ahmad**,** Syeda Sadaf Zehra, Mamoona Safdar, **Ejaz Ahmad Waraich** and Tanveer Ahmad. 2018. Morphological and anatomical characters are improved in safflower with foliar and seed primed selenium under salt stress conditions. **1st International and 2nd National conference on "Challenges and Opportunities to Boost Agriculture in Changing Climate"** organized by College of Agriculture Bahauddin Zakariya University, Bahadur Sub-Campus, Layyah, Punjab, Pakistan.
32. Zahoor Ahmad**,** Syeda Sadaf Zehra, Shabila Kouser, **Ejaz Ahmad Waraich** and Tanveer Ahmad. 2018. Foliar application of selenium accelerates physiochemical and antioxidant process to inhabit cadmium toxicity in *Zea mays.* **1st International and 2nd National conference on "Challenges and Opportunities to Boost Agriculture in Changing Climate"** organized by College of Agriculture Bahauddin Zakariya University, Bahadur Sub-Campus, Layyah, Punjab, Pakistan.

33. Zahoor Ahmad, **Ejaz Ahmad Waraich**, Muhammad Faisal, Muhammad Aamir Iqbal and Musarrat Ramzan.2019. Foliar applied salicylic acid (SA) improved physiological attributes in wheat (Triticum Aestivum L.) under salt stress conditions. 2 nd International Salinity Conference (ISC-28-30 April, 2019) Organized by Soil Salinity Laboratory (SSL), Department of Soil Science, UCA&ES, The Islamia University of Bahawalpur, Pakistan.

34. Zahoor Ahmad, **Ejaz Ahmad Waraich**, M. Zia-Ur- Rehman, Musarrat Ramzan and M. Aamir Iqbal.2019. Physiological and antioxidant activities of wheat enhanced by foliar silicon (Si) application under water deficit conditions. "**6th International Conference on Sustainable Agriculture in Changing Climate Strategies and Management"** organized by University of Poonch Rawalakot, held on June 19-21, 2019.

35. Imrana Mushtaq, **Ejaz Ahmad Waraich**, Rashid Ahmad and Muhammad Ahmad.2019. Influence of water stress at reproductive stage on morphological and

agronomic traits of camelina stiva.2019. **6th International Conference on Sustainable Agriculture in Changing Climate Strategies and Management"** held on 19th -21st June, Organized by University of Poonch, Rawalakot.

36. Ahsan Jamil, **Ejaz Ahmad Waraich**, Rashid Ahmad and Muhammad Ahmad.2019. Effect of sowing date on agronomic performance of *camelina sativa* L.2019. **6th International Conference on Sustainable Agriculture in Changing Climate Strategies and Management"** held on 19th -21st June, Organized by University of Poonch, Rawalakot.

37. Muhammad Umar Farooq, **Ejaz Ahmad Waraich**, Rashid Ahmad and Muhammad Ahmad.2019. Evaluating the phenotypic plasticity of camelina sativa under different levels of Phosphorus.2019. **6th International Conference on Sustainable Agriculture in Changing Climate Strategies and Management"** held on 19th -21st June, Organized by University of Poonch, Rawalakot.

38. Shehar Bano, Zahoor Ahmad, **Ejaz Ahmad Waraich**, Muhammad Aamir Iqbal, Sarfraz Ahmad. 2021. Screening of wheat genotypes using growth and physiological attributes at seedling stage under drought stress. **1st International Conference on Science, Technology, Engineering, Mathematics, and Social Sciences (STEMS) A multi-disciplinary conference. March 30-31, 2021**

39. Maria Rafiq, Zahoor Ahmad, **Ejaz Ahmad Waraich**, Muhammad Aamir Iqbal, Sarfraz Ahmad. 2021. Effect of drought stress on growth and chlorophyll contents of maize. **1st International Conference on Science, Technology, Engineering, Mathematics, and Social Sciences (STEMS) A multi-disciplinary conference. March 30-31, 2021**

M. Sc (Hons.)/M.Phil (As Major Supervisor) ***ANNEX-I***

S. #	Name of Student	Year	Title of Thesis
1	Abdul Shakoor	2004	Growth and Yield responses of Mung Bean (*Vigna munga* L.) to different levels of Phosphorous and Calcium
2	Anser Ali 97-ag-1051	2004	Physiological aspects of grain development in wheat (*Triticum aestivum* L.) at different levels of irrigation and nitrogen
3	Ijaz Ali 97-ag-1038	2004	Photosynthetic rate, Water relations and yield of wheat (*Triticum aestivum* L.) at different levels of irrigation and nitrogen
4	Muhammad Akram 99-ag-1054	2005	Water stress effects on water relations growth and yield of wheat (*Triticum aestivum* L.)
5	Ahmad Naeem Shehzad 99-ag-1232	2005	Performance of wheat(*Triticum aestivum* L.) in bed planting and conventional sowing under different nitrogen levels
6	Muhammad Yasin 99-ag-1240	2005	Water stress effects on early seedling growth of wheat (Triticum *aestivum* L.)
7	Raja G.M. Hur 2001-ag-1091	2006	Effect of foliar application of Potassium on growth, yield and quality of cotton
8	Zahoor ahmad 2005-ag-1658	2011	Response of cotton (*Gossypium hirsutum* L.) to foliar applied potassium sulphate (K_2SO_4)
9	Muhammad Tahir 2005-ag-1607	2011	Effect of bacterial inoculation on growth and yield of hybrid maize (*Zea mays* L.)
10	Shoaib shaukat 2006-ag-1493	2012	Improving water use efficiency by exogenous foliar application of anti-transpirants in wheat.
11	M. Usman Khalid 2006-ag-1593	2012	Effect of foliar applied phosphorous on growth, yield and physiological aspects of wheat.
12	Riaz Ahmad 2009-ag-2677	2013	Comparative study of growth, yield and oil quality of Camelina vs Canola under water deficit conditions.
13	Farhan Rashid 2003-ag-1981	2015	Effect of supplemental foliar applied potassium on drought tolerance potential of canola (*Brassica napus* L.)
14	Muhammad Mudassar Saeed 2011-ag-3513	2017	Evaluation of camelina sativa L. as a potential oil seed crop under water limited conditions
15	Tahir Abbas 2015-ag-51	2017	Agronomic evaluation and phenotypic plasticity of camelina under different levels of potassium
16	Ahsan Jamil Khan 2012-ag-3328	2018	Influence of seeding date on agronomic performance of Camelina sativa L.
17	M. Umer Farooq 2011-ag-2695	2018	Evaluating the phenotypic plasticity of camelina sativa L. under different levels of phosphorous.

18	Nimra Andleeb 2016-ag-230 (M.Phil-Botany)	2018	Influence of water stress at vegetative stage on morpho-physiological and agronomic traits of camelina sativa
19	Imrana Mushtaq 2016-ag-229 (M.Phil-Botany)	2018	Influence of water stress at reproductive stage on morphological and agronomic traits of camelina sativa.
20	Altaf Hussain 2013-ag3797	2019	Alleviating the effect of heat stress on two varieties of Canola by foliar application of Sulphur.
21	Iqra Ikram 2012-ag-3113	2019	Agronomic evaluation and phenotypic plasticity of Camelina sativa under different levels of nitrogen
22	Soban Rauf 2013-ag-2908	2019	Effect of sulphur on *Camelina sativa* L. and canola (*Brassica napus* L.) under heat stress
23	Muhammad Taimoor Manzoor. 2013-ag-3206	2019	Evaluation of seed priming with sulphur on two varieties of *Camelina sativa* L. under heat stress conditions
24	Madiha Irshad 2017-ag-2764 (M.Phil-Botany)	2019	Response of camelina to foliar application of Sulfur under heat stress
25	Zainab Tariq 2017-ag -2765 (M.Phil-Botany)	2019	Response of canola to foliar application of Sulphur under heat stress.
26	Aneeqa Munir 2018-ag-3517 (M.Phil-Botany)	2020	Application of potassium to attenuate the adverse effect of water stress in Mash Bean (*Vigna mungo L.*)
27	Hareem Shahid 2018-ag-3518 (M.Phil-Botany)	2020	Morpho-physiological response of wheat (*Triticum aestivum L.*) to foliar application of potassium under water stress
28	Asim Iqbal 2013-ag-3389	2020	Alleviation of heat stress in two varieties of *Camelina sativa* L. by exogenous application of Thiourea
29	Faisal Mustafa 2012-ag-2082	2020	Morpho-physiological responses of wheat (*Triticum aestivum* L.) to foliar applied potassium under different planting geometry
30	Fakher Shakeel 2012-ag-2202	2020	Morpho-Physiological responses of wheat (*Triticum aestivum* L.) to foliar applied boron under different planting geometry
31	Zahid Ghaffar 2014-ag-4827	2020	Attenuation of heat stress in two varieties of canola (*Brassica napus* L.*)* by application of sulfur.
32	Muhammad Haider Shakeel 2012-ag-2154	2020	Effect of exogenous application of zinc on growth, development and drought tolerance potential of mungbean (Vigna *radiata* L.)
33	Hasan abbas 2012-ag-2260	2020	Ameliorative effect of boron application on maize (*Zea mays* L.) under water stress conditions.
34	Gulab-ud-Din 2014-ag-5373	2020	Effect of foliar application of potassium (*Triticum aestivum* L.) under drought stress
35	Muhammad Nazar 2014-ag-4789	2020	Evaluation of exogenous salicylic acid application methods for ameliorating adverse effects of drought stress in maize (Z*ea mays* L.*)*
36	Adnan Ashraf	2021	Mitigation of Adverse Effects of Drought Stress in

	2015-ag-7297		Wheat (*Triticum aestivum L*) through Inoculation of PGPR
37	Fahim Sardar 2014-ag-5006	2021	Effect of exogenous application of salicylic acid on growth, development, and drought tolerance potential of mungbean (*Vigna radiata* L.)
38	Nazia Ishfaq 2015-ag-6554	2021	Effect of foliar application of Sulphur to mitigate drought stress in wheat (*Triticum aestivum L.*)
39	Tayyub Hussain 2019-ag-19	2021	Exogenous Application of Sulphur for Ameliorating the Adverse Effect of Heat Stress in *Camelina sativa L.*
40	Mohammad Asghar Ali 2013-ag-2204	2021	Effect of foliar applied sulphur to mitigate the heat stress in canola (*Brassica napus* L.)
41	Abdul Razaq Shahid 2014-ag-5046	2021	Grain growth, yield and phosphorus use efficiency (PUE) of wheat (*Triticum aestivium*) as influenced by different levels of soil applied phosphorus.
42	Malik Muhammad Abdullah 2020-ag-3	2022	Exogenous application of silicon to mitigate drought stress in soybean (*glycine max* L.)
43	Gohar Basheer 2016-ag-6294	2022	Exogenous application of silicon in maize (*zea mays* L.) to mitigate adverse effects of drought stress
44	Mazhar Abbas 2016-ag-6173	2022	Effect of silicon application on morphophysiological traits of mung bean under drought stress
45	Waheed Ahmad 2016-ag-6459	2022	Silicon mediated improvements in drought and salinity tolerance of black gram (*Vigna mungo* L.)
46	Anila Sabir 2020-ag-1649 (M.Phil-Botany)	2022	Application of silicon on Maize (Z*ea mays* L.) to mitigate drought and cadmium stress
47	Humaira Ishaq 2018-ag-5457 (M.Phil-Botany)	2022	Application of silicon on Maize (*Zea mays* L.) to mitigate drought and nickel stress
48	Ahmad Faraz 2017-ag-10077	2023	Foliar Application of Potassium to Mitigate Drought Stress in *Camelina Sativa* L. Crantz
49	Hafsa Asghar 2021-ag-28	2023	Attenuating draught stress by foliar application of zinc (zn) in Maize (Z*ea mays* L.)
50	Muhammad Hussnain 2015-ag-5120	2023	Morpho-physiological and yield response of *camelina sativa* L. to exogenously applied silicon under drought conditions
51	Aiman Sikandar 2021-Ag-1185 (M.Phil-Botany)	2023	Foliar applied iron- mediated improvements in drought stress tolerance of Mungbean (*Vigna radiata* L.)
52	Azhar Mahmood 2018-ag-6674	2024	Improving drought tolerance in Cotton (*Gossypium hirsutum* L.*)* through seed priming with thiourea
53	Israr Ahmad 2016-ag-5178	2024	Improving drought tolerance in mungbean (*Vigna radiata L.*) by exogenous application of thiourea under

			limited water conditions
54	Surriya Bibi 2022-ag-14	2024	Soil applied Thiourea mitigate the drought stress in maize (*Zea mays* L.) by improving water relation, biochemical and root attributes.
55	Jeevan Saeed 2022-ag-10	2024	Improving drought tolerance in Camelina *(camelina sativa* L.*)* by foliar application of thiourea.
56	Nazima Saleem 2022-ag-1307 (M.Phil-Botany)	2024	Exogenous application of melatonin to mitigate drought stress in wheat
57	Umme Habiba 2022-ag-1308 (M.Phil-Botany)	2024	Mitigating the drought stress by foliar application of melatonin in *camelina sativa* L.
58	Saba Hanif 2022-ag-1344 (M.Phil-Botany)	2024	Influence of soil applied zinc on grain quality and zinc uptake of different maize varieties

Ph.D (As Major Supervisor)

S. #	**Name of Student**	**Year**	**Title of Thesis**
1	Nauman Shabbir 2007-ag-11	Completed-2014	Nutrient management strategies in alleviation for drought stress in wheat (*Triticum aestivum* L.)
2	Zahoor Ahmad 2005-ag-1658	Completed-2015	Maize (*Zea mays* L.) responses to supplemental foliar applied phosphorous under drought stress.
3	Zeeshan Ahmad 2008-ag-514	Completed-2016	Characterization and evaluation of *camelina sativa* as a potential oilseed crop under water limited environment.
4	Muhammad Ahmad 2010-ag-2673	Completed-2023	Application of thiourea to attenuate the adverse effect of heat stress in camelina and canola.
5	Madeeha Kausar 2015-ag-3659	Thesis submitted in 2023	Morpho-physiological response and nutritional quality of Moringa (*moringa oleifera*) as influenced by integrated use of organic and inorganic amendments.
6	Bilal Ahmad Shahzad 2009-ag-2194	Thesis submitted in 2023	Mitigating the adverse effects of drought stress in *Camelina sativa* and canola through exogenous application of silicon.
7	Arslan Haider 2018-ag-435	In progress	Attenuating the adverse effect of drought stress in *camelina sativa* L. by use of biodegradable super-absorbent polymers.
8	Nimra Khalid 2020-ag-989	In progress	Application of plant-based nanomaterials for enhancing drought and salinity tolerance in linseed (*Linum usitatissimum* L.)
9	Sanam Maqbool	In progress	Biofortification of *camelina sativa* L. with zinc (zn) and iron (fe) under drought stress.

M.Sc. (Hons.)/M.Phil (As Committee Member) ***ANNEX-II***

S. #	Name of Student	Year	Title of Thesis
1	Muhammad Abid Nasir	Soil science/2004	Recycling of organic matter in maize plants
2	Munir David	Soil science/2004	Using composted organic waste enriched with chemical fertilizer and L-tryptophan for improving growth and yield of maize.
3	Syed sadaqat Hussain	Soil science/2004	Effect of foliar application of Calcium chloride on growth and yield of corn
4	Azam Hussain	Soil science/2004	Growth and yield responses of wheat to foliar applied Potassium
5	Muhammad Jamil Ashraf	Soil science/2004	Effect of encapsulated calcium carbide on growth, yield and nitrogen use efficiency in wheat
6	Muhammad Iqbal	Soil science/2004	Growth inoculation and yield of Mash bean as affected by Rhyzobium inoculation and soil applied L-Tryptophan
7	Syed Ali Mehdi Raza	Soil science/2005	Growth and yield responses of Tomato (*Lycopersicon esculentum* Mill) to soil applied calcium carbide and L- methionine.
8	Bushra Muqadas	Soil science/2005	Soil physical properties and irrigated wheat plant growth as affected by different tillage pratices and farm manure application
9	Sultan Ali	Horticulture/ 2004	Growth, seed yield and seed quality of carrot as influenced by different regimes of N & K
10	M.Tahir Ali	Horticulture/ 2004	Effect of different doses of P and K on seed production of carrot in different spacing
11	Muhammad Aqeel Feroze	Horticulture2 004	Effect of Paclobutrazole on vegetative and reproductive growth of Mango cv.Chaunsa
12	Mehammad Asim	Horticulture/ 2004	Effect of root stocks on fruit quality and peel oil contents of kinnow mandarin.
13	Shah Jehan	Horticulture/ 2005	Effect of phosphorus application on growth and seed yield of Lettuce cultivars
14	Hassan Munir	C. Phy./2004	Physiological basis of primed wheat seed performance under late sown conditions
15	Kashif Hafeez	C. Phy./2004	Influence of different pre-sowing seed invigoration techniques
16	Habib Ullah	Horticulture/ 2005	Growth and yield response of potato to various methods of Nitrogen application
17	Muhammaad Shafiq	Horticulture/ 2005	Repeattibility and correlation studies in Rosa spp.under Fsd condition
18	Shabbir Hussain	Horticulture/ 2005	Effect of folir application of calcium chloride on growth and yiel of tomato (*Lycopersicum esculentum* L.)
19	Sajid Farid	Horticulture/ 2005	Effect of NPK on vegetative, reproductive and Malformation physiology of mango (*Magnifera indica* L.) cv. Langra
20	Abdul Fattah	ISES/2006	Utilization of organic waste for reclamation of moderately saline sodic soil.
21	Naheed Akhtar	Horticulture/ 2006	Effect of different herbicide on growth and yield of Potato

22	Muhammad Amir	ISES/ 2006	Exploiting the genotypic variability among the cotton cultivars for potassium use efficiency
23	Shahlah Rashid	Horticulture/ 2006	Effect of variation in the size of polypropylene bags on the yield of Oyster Mushroom (*Pleurotus osteatus*.L)
24	Adil Jamal	P.B.G/2006	Genetic variability and character association among various yield and quality traits in rice (*Oryza sativa* L.)
26	Mohsin Zafar	ISES/2006	Phosphorus absorption in fodder crops
27	Shabbir Hussain	Horticulture/ 2006	Effect of foliar application of Calcium chloride on growth and yield of tomato (*Lycopersicum esculentum* L.)
28	Ghulam Hassan Abbasi	ISES/2006	Methods of Phosphorous applications and irrigation schedule influencing P use efficiency in Wheat.
29	Ifra Saleem	ISES/2007	Performance of cotton genotype under saline condition in pot culture
30	Maryam sarfraz	ISES/2007	Assessment of Salt tolerance of cotton genotypes in solution culture
31	Tajammal Hussain	ISES/2007	Reclamation of salt affected field by growing rice and wheat crops using amendments canal water and brackish water
32	Muhammad Qaiser Majeed 2001-ag-1102	ISES/2007	Effect of chemical amendments on the phytoextraction of Pb and Zn by wheat.
33	Usman Irshad 2001-ag-1104	ISES/2007	Isolation and screening of rhizobial strain for improving growth of lentil seedlings under axenic conditions.
34	Sajid Masood 2002-ag-1653	ISES/2008	Root biomass and vegetative growth of maize crop as affected by different farm manure levels in pot culture.
35	Rizwan Asghar 2001-ag-1235	ISES/2008	Ion accumulation in tolerant and sensitive genotypes of cotton under NaCl salinity.
36	Atif Mahmood 2002-ag-1534	ISES/2008	Growth and ionic attributes of sunflower under saline conditions.
37	Syed Kalim Ullah Shah 2002-ag-1493	ISES/2008	Behavior of ion accumulation in different leaves of salt sensitive and tolerant wheat genotypes under NaCl salt stress.
38	Rab Nawaz 2002-ag-1538	ISES/2008	Effect of NaCl salinity and Nitrogen on vegetative growth and mineral contents of Maize.
39	Muhammad Tahir Akbar 2002-ag-1647	ISES/2008	Soil Physical properties and corn yield under different tillage systems and dairy manure levels.
43	Anwar-ul-Haq	ISES/2007	Performance of maize genotypes using brackish water with and without amendments
44	Nafeesa Naveed 2010-ag-749	PBG/2012	Estimation of combining ability effects for yield, oil and protein contents in upland cotton.
45	Tayeb Muhammad 2010-ag-641	Hort./2012	Effects of nursery raising dates, seedling age and nitrogen levels on growth and yield of onion. (*Allium cepa* L.)
46	Areeba Kanwal 2006-ag-2295	Agronomy/2012	Impact of irrigation scheduling and nutrient management on growth, yield and water use efficiency of wheat.
47	Muhammad	Hort./2012	Effect of hydro-priming and sand priming treatment on

	Tanveer Anjum 2006-ag-1949		germination of bitter gourd seeds.
48	Sadaf Mubarak 2007-ag-329	Botany/2012	Influence of salicylic acid on growth and some physico-chemical attributes of barley (*Hordeum vulgare* L.) under Zn toxicity.
49	Farhana Kausar 2006-ag-626	Botany/2012	Interactive effect of foliar application of nitric oxide (NO) and salinity on wheat (*Triticum aestivum* L.)
50	Muhammad Qudrat Ullah Farooqi 2006-ag-1814	Crop Physiology/2012	Effect of supplemental foliar applied K on yield and quality of autumn planted Maize under water stress.
51	Muhammad Haseeb 2006-ag-1846	Crop Physiology/2012	Effect of supplemental foliar applied N on achene yield of autumn planted Sunflower under water stress at reproductive stage.
52	Momal Ali Tahir 2010-ag-718	ISES/2012	Influence of abiotic stresses (Water and salinity) on physiological, biochemical and yield attributes of Cotton (*Gosypium hirsutum* L.)
53	Rana Abdur Rehman	Hort./2012	
54	Muhammad Mohsin Nawaz 2007-ag-1880	Agronomy/2012	Interactive effect of irrigation and P on root-shoot development and yield of wheat.
55	Muhammad Atif 2007-ag-2336	Agronomy/2012	Simulating the effect of transplanting dates on fine rice cultivars using CSM-CERES-RICE Model.
56	Mudassir Rehman 2011-ag-504	Agronomy/2012	Simulating crop water productivity of cotton under deficit irrigation using crop growth modeling approach.
57	Haroon Shahzad 2007-ag-2140	ISES/2013	Residual effect of mulch on soil physico-chemical indices growth and yield of wheat crop.
58	Muzammal Rehman 2007-ag-2225	Agronomy/2013	Simulating the effect of planting time on growth yield and quality of spring sown Soyabean using CROPGRO Soybean model.
59	Friha Amin 2007-ag-2043	ISES/2013	Role of organic and inorganic amendments in reducing uptake of cadmium in wheat grain
60	Muhammad sajid Iqbal 2007-ag-2728	ISES/2013	Transport of zinc from root to shoot in Rice (*Oryza sativa* L.) under saline hydroponic condition.
61	Safdar Aziz 2007-ag-2255	Agronomy/2013	Simulating the impact of moisture stress and seed rate on growth yield and water use efficiency of wheat using CSM-CERES wheat model.
62	Muhammad Jamshed Zarrar 2007-ag-2114	ISES/2013	Bio assessment of heavy metal contamination in Iqbal town Faisalabad and spatial variation over time
63	Tasneem Akhtar 2007-ag-2510	ISES/2013	Transport of zinc from root to shoot in Rice (*Oryza sativa* L.) under saline hydroponic condition.
64	Mujahid Ali 2007-ag-1878	Agronomy/2013	Optimizing the application rate of FMC-X100 for weed control in wheat (*Triticum aestivum* L.)

65	Muhammad Asif Ali 2011-ag-653	ISES/2013	Effect of Gibbrelic acid on growth and yield of Mungbean in contaminated soils.
66	Salma Niaz 2007-ag-2313	Agronomy/2013	Response and adaptation of Soya- bean cultivars to different sowing dates under Faisalabad conditions.
67	Muhammad Aqeel Shah 2007-ag-2267	ISES/2013	Qualifying nitrate movement in soil profile under different tillage strategies.
68	Mazhar Iqbal 2011-ag-651	ISES/2013	Effect of plastic mulch on water use efficiency in maize with different irrigation practices.
69	Aftab Ashraf 2007-ag-2416	Agronomy/2013	Influence of different production systems on weed infestations and productivity of autumn maize.
70	Waqar Khalid 2008-ag-1939	Agronomy/2014	Effect of various sowing methods and weed control practices on growth and yield of direct seeded medium grain rice
71	Muhammad Atif Shabbir 2008-ag-2985	Agronomy/2014	Effect of different tillage techniques on productivity of wheat (*Triticum aestivum* L.)
72	Muhammad Alyaas 2008-ag-2069	Agronomy/2014	Effect of foliar application of Zinc on growth and yield of autumn Maize (*Zea mays* L.) under skipping irrigation at different stages
73	Gulam Shabbir 2008-ag-2572	Agronomy/2014	Quantification of temporal variability in sowing of Mung bean through field setting and simulation
74	Shahzad Tahir 2008-ag-2098	Agronomy/2014	Assessing water use efficiency of cotton (*Gossipium hirsutum* L.) under water limiting conditions and climatic variability using simulation modeling approach
75	Muhammad Sohail 2008-ag-2999	Agronomy/2014	Response of different Maize (*Zea Mays* L.) hybrids against the various sowing dates under the agro-ecological conditions of Faisalabad.
76	Habib Ullah 2008-ag-2389	Agronomy/2014	Standardizing the fertilizer application timings for relay cropped wheat (*Triticum aestivum* L.) in cotton
77	Sohail Aslam 2011-ag-594	ISES/2014	Physiological and biochemical response of maize to foliar applied anti-transpirants under water stress
76	Asad Qadeer 2008-ag-1823	Agronomy/2014	Simulating phenology, growth and yield of maize hybrids planted at variable dates in spring season.
77	Shah Ameer Nauman 2008-ag-1773	ISES/2014	The spatial distribution and assessment to heavy metal contamination along Faisalabad- Sheikupura Faisalabad, Road.
78	Ameer Ali Mehboob 2007-ag-2690	Hort./2014	Exogenous application of Salicylic acid to improve salt tolerance in Cucumber.
79	Syed Adnan Mazer 2008-ag-2112	ISES/2014	Nitrate movement in soil profile in response to different fertilization strategies.
80	Khurram Zia 2008-ag-1956	Agronomy/2014	Simulating climate change impact on growth, development and yield of seed cotton under various planting densities and nitrogen increments.
81	Muhammad Amjad Shahzad 2012-ag-975	Agronomy/2014	Comparative Efficacy of Different planting methods and their influence on productivity and staple length of Cotton.

82	Tahir Abbas 2011-ag-679	ISES/2014	Growth response of Maize to applied phosphatic fertilizer with and without organic soil conditioner
83	Saima Yousaf 2008-ag-2370	Agronomy/2014	Response of *Rhizobium Japonicum* and *Pseudomonas Fluorescens* inoculation on the performance of Soybean (*Glycine max* L.) under Faisalabad Conditions.
84	Sibgha Zafar 2012-ag-595	PBG/2014	Genetic potential of Sunflower (*Helianthus Annuus* L.) seedlings for moisture deficit tolerance
85	Iurem Shahzadi 2008-ag-1800	PBG/2014	Genotypic response of Canola (*Brassica napus* L.) accessions to moisture stress
86	Husnain Jawad 2008-ag-1900	Agronomy/2014	Optimizing of pit dimensions and geometry in spring planted sugarcane.
87	Muhammad Furqan Ashraf 2008-ag-2210	Crop Physiology/2014	Evaluation of *Brassica napus* L. genotypes for their drought tolerance potential
88	Tanveer Abbas 2008-ag-2327	Agronomy/2014	Effect of different frequencies of irrigation on the growth and yield of different forage oat cultivars grown under Faisalabd conditions
89	Muhammad Naeem 2012-ag-968	Agronomy/2014	Comparative performance of two cotton (*Gossypium hirsutum* L.) genotypes planted at various planting densities
90	Araiz Nazir 2008-ag1988	Hort./2014	Effect of Heat Stress on Physiological and Morphological attributes of Tomato.
91	Muhammad Irfan Athar 2004-ag-1427	Hort./2014	Characterization of Elite tomato genotypes for yield related attributes.
92	Ijaz Ahmad Gondal 2008-ag-1772	ISES/2014	Comparative effect of Gypsum and high molecular rate compounds to reclaim saline sodic soil and wheat growth.
93	Haseeb Zahid 2008-ag-1708	Agronomy/2015	Evaluating the performance of different Soybean Cultivars at various row spacing at Faisalabad conditions
94	Maria Iqbal 2013-ag-62	Botany/2015	Modulation in morphological and biochemical attributes of peal Millet by foliar- applied proline under water deficit conditions
95	Anwar Jawed 2009-ag-3533	Hort./2016	Screening of potato germpalsm for *IN VITRO* micro tuber induction.
96	Kanza Ashraf 2014-ag-868	Botany /2016	Influence of exogenous application of proline as foliar spray on Pea (*Pisum Sativum* L.) under water deficit conditions
97	Nukhba Iram 2014-ag- 69	Botany/2016	Role of foliar- applied proline on Pea (*Pisum Sativum* L.) under water deficit conditions
98	Hira Zulfikar 2012-ag-66	Botany/2016	Role of strigolactone (GR.24) on morpho-physiological and biochemical attributes of sunflower (*Heliathus annus* L.) under saline conditions
99	Shagufta Batool 2014-ag-1256	Botany/2016	Pea (Pisum sativum L.) response to foliar applied nitric oxide under water deficit condition
100	Ayesha Chudhary 2014-ag-1051	Botany/2016	Foliar applied strigolactone (GR.24) induced modulation in sunflower (*Heliathus annus* L.) under saline conditions

101	Iqra Khurshid 2014-ag-571	Botany/2016	Influence of exogenous application of strigolactone (GR.24) as foliar spray on growth, gas exchange and anti-oxidant activity in sunflower (*Heliathus annus* L.) under saline conditions
102	Muhammad Bilal 2014-ag-622	ISES/2016	Role of lead tolerant Rhizobacteria to improve plant growth and soil health in lead contaminated soil
103	Fatima Riaz 2014-ag-1369	Botany/2016	Effective screening of antimicrobial antioxidant activities and phytochemical analysis of different parts of Syagrus romanzoffiana and Bismarckia nobilis
104	Zubaria Ashraf 2014-ag-1387	Botany/2016	Measurement of antimicrobial antioxidant activities and phytochemical analysis of different parts of Caryota mitis and Croton tiglium
105	Aniqa Imtiaz 2014-ag-1368	Botany/2016	Investigation of antimicrobial antioxidant activities and phytochemical analysis of different parts of Leucophyllum frutescence and trachyphycarpus fortune
106	Shahid Paervez 2014-ag-902	Botany/2016	Role of exogenous application of strigolactone (GR.24) in in sunflower (*Heliathus annus* L.) under saline conditions.
107	Samia Sherazi 2014-ag-1742	Botany/2016	Glycine betain induced alteration in Pea (Pisum sativum L.) under water deficit condition.
108	Aneela Nawaz 2014-ag-1665	Botany/2016	Combined effect of foliar applied Calcium Nitrate and drought stress on Pea (Pisum sativum L.)
109	Saima Noreen 2014-ag-2874	Botany/2016	Response of Pea (Pisum sativum L.)to interactive effect of foliar applied Nitric oxide and drought conditions
110	Aniqa Nawaz 2014-ag-918	Botany/2016	Effect of multi-trait plant growth promoting rhizobacteria (PGPR) on wheat genotypes under saline conditions
111	M. Rizwan 2014-ag-8014	Botany/2016	Impact of exogenously applied strigolactone (GR.24) on sunflower (*Heliathus annus* L.) as pre-seed treatment under saline condition.
112	Hafiza Kehkashan 2014-ag-2859	Botany/2016	Evaluation of transgenic sugarcane (Saccharum officinarum L.) for cold tolenrance
113	M. Zubair Anjum 2010-ag-2872	ISES/2016	Effect of organic and inorganic amendments on uptake and accumulation of Cadmium by different what genotypes
114	Muhammad Luqman 2012-ag-8	Botany/2016	Variation in morphological , physiological and biochemical attributes of Sunflower (*Heliathus annus* L.) to foliar applied strigolactone (GR.24) under saline conditions
115	Aiza Munir 2009-ag-2879	ISES/2016	Evaluation of Zn bioavailability in Rice under saline conditions
116	Farzana Ashraf 2010-ag-617	Botany/2016	Effect of salt stress on behavior of differenr genotypes of Sunflower (*Heliathus annus* L.) at seedling stage.
117	Iqra Shafa 2010-ag-2929	IHS/2016	Effect of different levels of nitrogen and phosphorous on seed yield and seed quality of cotton.

118	Saira sattar 2010-ag-2927	IHS/2016	Physio-chemical attributes of different Carrot cultivars in response to various applications of NPK
119	Zainab Jaffar 2012-ag-645	Botany/2016	Influence of water deficit conditions and foliar applications of trehalose on growth, gas exchange and biochemical attributes of Pea (*Pisum sativum* L.)
120	Misbah 2012-ag-644	Botany/2016	Alteration in physiological and biochemical characteristics of Pea (*Pisum sativum* L.) in response to foliar applied trehalose under water deficit conditions
121	Muhammad Ahmad 2010-ag-2673	Agronomy/2016	Simulating the impact of sowing tome in plant spacing on growth and productivity of pearl millet under semi-arid environment.
122	Farhat Naz 2014-ag-2995	Botany/2016	Effect of exogenously applied Calcium nitrate on some key physiological and biochemical attributes of Pea (*Pisum sativum* L.) under drought stress
123	Shahraz Nawaz 2014-ag-9108	ISES/2016	Growth and yield response of rice genotypes to Phosphorus deficiency in soil
124	Saima Noreen 2014-ag-2874 Dr. Shahbaz	Botany/2016	Response of Pea (Pisum Sativum L.) to interactive effect of foliar applied nitric oxide and drought stress conditions
125	M. Bilal Ahmad 2014-ag-622	ISES/2016	Role of Lead tolerant rhizobacteria to improve plant growth and soil health in lead contaminated soil
126	M. Luqman 2012-ag-08	Botany/2016	Variation in morphological, physiological and biochemical attributes of sunflower to foliar applied strigolactone (GR.24) under saline condition
127	Zil -E - Obeer 2014-ag-9178	ISES/2016	Comparative efficacy of different inoculation methods for improving growth and yield of Maize (*Zea mays* L.)
128	Muhammad Hammad Farooq 2010-ag-2824	Agronomy/2016	Effect of P levels and application methods on the growth ,yield and quality of Linseed
129	Noman Saeed 2010-ag-3320 Dr. Khuram Ziaf	Horticulture/ 2017	Growth and productivity of Radish CV forth days in response to different sowing dates and thio- urea
130	Sumayya Bibi 2013-ag-634	Botany 2017	Alteration in Okra response to salt stress by pre-sowing seed treatment with Thaio Urea
131	Sahar Nosheen 2015-ag-505	Botany 2017	Effect of foliar spray of trehalose on soybean under saline regimes
131	Yasmeen Sarwar 2002-ag-1235	Botany 2017	Modulation in growth , Physiological and biochemical attributes of Sun flower by GR24 application under saline stress
132	Saba akram 2013-ag-1915	Botany 2017	Interactive effect of pre-sowing seed treatment with trehalose and salt stress on soybean
133	Iqra Iftikhar 2-13-ag1392	Botany 2017	Influence of pre-seed treatment with thiamine on soybean under saline regimes
134	Gohar I shaq 2011-ag-3271	ISES-2017	The residual effect of Phosphorus on growth and yield of wheat in salt affected soils
135	Andleeb Riaz 2015-ag-1017	Botany 2017	Response of chick peas to foliar applied Thiamine under drought stress conditions
136	2015-ag-1230	ISES	Assessment of arsenic in ground water and health risk

			in Bhakar and Hafizabad Punjab
137	Bushra Irfan 2011-ag-940	Botany-2017	Interactive effect of pre sowing seed treatment with salt stress on morphological, physiological and yield attributes of sesame
138	Sadia Aziz Dhillon 2015-ag-1424	Botany-2017	Impact of exogenous applied thiourea as foliar spray sesame growth and development under salt stress
139	Bisma Masood 2015-ag- 1423	Botany-2017	Combined influence of foliar applied Glycine betain in salt stress in sesame
140	Wajid Ali 2011-ag-3012	ISES	Zinc use efficiency and maize growth as affected by different sources and application methods of zinc fertilizers
141	Iram Jamil 2015-ag-10	Botany-2017	Alteration in morphological , physiological and biochemical attributes of sesame to pre sowing seed treatment of trehalos under salt stress
142	Arneeb Traiq 2015-ag-1338	Botany-2017	Exogenous application of Glycinebetain as pre–sowing seed treatment response to sesame in under saline regimes
142	Muhammad Ishfaq 2015-ag-219	ISES-2018	Potassium uptake by wheat and maize roots as affected by foliar application of potassium
143	Muhammad Shakeel Hanif 2011-ag-3203	Agronomy-2018	Effect of foliar application of Salicylic acid on growth and yield of Autumn Maize (*Zea mays* L.) under water stress at reproductive stage.
144	Adeel Ahmad 2016-ag-2236	ISES-2018	Role of plant growth promoting Rhizobacteria to improve the growth of Cowpea in lead contaminated soil
145	Munawar Hussain 2016-ag-3687	ISES-2018	Potential of acid and base activated biochar derived from cotton stalk for the removal of arsenic from contaminated water.
146	Bilal Abbas 2012-ag-3022	ISES-2018	Assessment of nitrate and deity contents in frozen and fresh vegetables irrigated with waste water.
147	M. Junaid Afzal 2012-ag-3218	ISES-2018	Drinking water quality parameters of ice samples from different factories in Faisalabad.
148	Iqra Qayyum 2016-ag-113	Botany-2018	Effect of foliar applied Gibberellic acid in maize under salt stress.
149	Muhammad Salahuddin 2016-ag-72	Agronomy-2018	Evaluation of foliar applied trehalose for its ameliorative effect on sunflower under water stress at reproductive stage
150	Mian Nauman Irshad 2012-ag-3413	Agronomy-2018	Effect of supplemental foliar application of nitrogen on spring maize under water deficit conditions
151	Tehreem Nasir 2012-ag-3591	ISES-2018	Concentration of heavy metals in herbs spices
152	Moeen Ijaz 2012-ag-2807	ISES-2018	Mapping of Kot addu soil salinity using landsat 8 Imagery
153	Muhammad Umair Abid 2012-ag-3537	ISES-2018	Effect of maize –legume intercropping on soil physical properties, phosphorus uptake and crop use.

154	Muhammad Shoaib Ismail 2012-ag-4909	Agronomy-2018	Effect of supplemental foliar application of Potassium on spring maize under water deficit condition
155	Muhammad Naeem Younis 2012-ag-3491	ISES-2018	Comparative response of different wheat cultivars to various forms of nickel in rooting medium
156	Muhammad Kaleem 2012-ag-4086	ISES-2018	Effect of different phosphorous levels to improve growth and yield of rice and P availability in saline sodic soils
157	Atif Hussain 2011-ag-3985	ISES-2018	Effect of Potassium fertilizers on rice growth and yield in normal and saline soil
158	Amir Sohail 2012-ag-3324	ISES-2018	Effect of combined applications of polymer coated phosphate and potasic fertilizer on yield and nutrient use efficiency of wheat
159	Attiq ur Rehman Ashraf 2016-ag-82	ISES-2018	Accumulation of metals, copper, zinc and led in plants grown near road side: A case of Samundari road Faisalabad
160	Muhammad Tauseef Jaffar 2017-ag-204	ISES-2019	Efficacy of integrating chemical herbicide and allelopathic bacteria for control of wild oat (Avena *fatua* L.) in wheat (*Triticum aestivum* L.)
161	Maria Hashmi 2013-ag-2750	ISES-2019	Enhancing phosphorous use efficiency of wheat by applying polymer coated phosphatic fertilizers.
162	Zohaib Ansar 2013-ag-3852	Agronomy-2019	Sunflower (*Helianthus annus* L.) tolerance to water deficiency as affected by foliar application of potassium
163	Muhammad Waqas 2013-ag-3267	Agronomy-2019	Effect of foliar application of silicon on maize (*Zea mays* L.) under water deficit condition
164	Abdul Majid 2011-ag-2131	Agronomy-2019	Effect of foliar application of trehalose on hybrid maize (*Zea mays* L.) under water deficit condition.
165	Abid Kamran 2016-ag-2235	ISES-2019	Wheat yield and soil physic-chemical properties under organic and inorganic nitrogenous fertilizer
166	Rimsha Farooq 2015-ag-1379	Botany-2019	Trehalose induced alteration in morpho-physiological and biochemical attributes of Canola under saline conditions
167	Muhammad Ahmad Gill 2017-ag-1337	Irrigation & Drainage-2019	Water Pricing and implementation strategies for sustainable irrigation system
168	Hira Tanveer 2017-ag-2880	Botany-2019	Impact of various source of sulphur application on maize growth and productivity
169	Wazir Aittizaz Ahsan 2017-ag-1473	ISES-2019	Evaluation of spring water quality of Skardu city.
170	Zunaira Anwar 2017-ag-2719	Botany-2019	Bio-fortification of autumn maize through the application of iron and zinc
171	Iqra Abid 2017-ag-1479	ISES-2019	Assessment of heavy metals contamination in milk samples collected from different sources in Faisalabad.
172	Arshia Zia 2019-ag-1997	Botany-2021	Application of Proline as pre-sowing seed treatment on Okra under water deficit conditions
173	Shabana Nibahoo 2019-2035	Botany-2021	Alteration in Okra Plant responses by foliar applied proline under drought stress conditions

174	Tanveer Abbas 2019-ag-2079	Botany-2021	Combined effect of Trehalose and drought stress on Pea Plant.
175	Ubaid -ur-Rehman 2015-ag-6708	ISES-2021	Effect of silicon on wheat (*Triticum aestivum* L.) during salinity and water stress
176	Muhammad Khubaib Ayyaz 2015-ag-7086	ISES-2021	Mitigation of heat stress in wheat seedlings by application of thermo-tolerant Rhizobacteria.
177	Areeba Maheen 2019-ag-2049	Botany-2021	Seed priming effects of thiourea on Flax (*Linum usitatissimum* L.) under drought stress conditions.
178	Samra Abbas 2019-ag-1995	Botany-2021	Influence of foliar application of proline on Chia (*Salvia hispania* L.) under drought stress conditions.
179	Huma Tabassum 2019-ag-2003	Botany-2021	Does exogenous application of trehalose as foliar spray affect morphological and physiological parameters of coriander (*Coriandrum sativum* L.) under water stress
180	Sharjeel haider 2019-ag-187	ISES-2021	Estimation of sodium transport using Nacl in wheat (*Triticum aestivum* L.)
181	Zeenat Ehsan 2017-ag-340	Botany-2021	Effect of foliar application of thiourea on *Spinacia oleracea* L. under drought stress conditions.
182	Maria Riaz 2016-ag-3683	Botany-2021	Effect of salicylic acid on growth of canola (*Brassica naps* L.) under cadmium stress.
183	Amna Shafiq Ullah 2017-ag-4745	Botany-2021	Effect of salicylic acid on growth of wheat (*Triticum aestivum* L.) under cadmium stress.
184	Muhammad Tayyab Mahmood 2015-ag-6326	ISES-2021	Effect of Salicylic acid on growth of wheat grown under cadmium stress
185	Muhammad Sunnan 2015-ag-6570	ISES-2021	Effect od biofertilizer strains on growth and yield of different soyabean cultivars
186	Ambreen Ahmad 2019-ag-2044	Botany-2021	Morpho-physiological and biochemical responses of Sesame (*Sesamum indicum* L.) to exogenously applied proline
187	Noman Younas 2015-ag-7133	ISES-2021	Differential response of processed animal manure on zinc biofortification in Lentil under saline sodic soil.
188	Fareeha Mubeen 2019-ag-2073	Botany-2021	Influence of seed priming with thiourea on Okra (*Abelmoschus esculentus* L.)
189	M. Moaz Khurshid 2019-ag-1775	ISES-2021	Effect of Phosphatic fertilizer on growth and yield of wheat and different P fractions in saline sodic soil.
190	M. Sadiq 2015-ag-6773	ISES-2021	Uptake and distribution of heavy metals Cd, Ni and Lead by Brassica cultivars irrigated with metal contaminated water.
191	Ahsan Ali 2015-ag-6767	ISES-2021	Comparative growth response and nickel absorption by leguminous and non-leguminous plants irrigated with nickel contaminated water.
192	Safina 2019-ag-3599	Botany-2021	Impact of foliar application of Glycine betain on Okra (*Abelmoschus esculentus* L.) under drought stress conditions.

193	Muneeb -ur-Rehman 2019-ag-226	Irrigation & Drainage/2021	Field assessment of solar power drip irrigation system for vegetable crops.
194	Khazra Fiaz 2019-ag-2019	Botany-2021	Growth regulation effects of thiourea application on *Linum ussitatissimum* L. under water stress conditions.
195	Muhammad Saleem 2019-ag-2092	Botany-2021	Efficacy of gypsum on growth and morpho-physiological aspects of spinach (*Spinacia oleracea* L.)
195	Naveed ul Hassan 2019-ag-2011	Botany-2021	Combined effect of salicylic acid and zinc on barley (*Hordeum vulgare* L.) under drought stress conditions.
196	Zainab Fatima 2019-ag-2078	Botany-2021	Exogenous application of salicylic acid as foliar spray may alter flax (*Linum ussitatissimum* L.) under drought stress.
197	Sana Shujat 2019-ag-2059	Botany-2021	Influence of pre-sowing seed treatment with basil leaf extract on maize (Zea mays L.) seedlings.
198	Maria Chaudhary 2020-ag-958	Botany-2022 (Dr. Shahbaz)	Influence of foliar applied trehalose on *Coriander sativum L.*
199	Tahrim Ramzan 2018-ag-321	Botany-2022 (Dr. Shahbaz)	Effect of exogenous application of Phenylalanine as foliar spray on Mustard (*Brassica Campestris* L.) under water scarcity conditions.
200	Hira Anees 2020-ag-931	Botany-2022 (Dr. Shahbaz)	Responses of *Brassica campestris* L. to foliar application Phenylalanine under saline conditions.
201	Ayesha Saddiqa 2020-ag-918	Botany-2022 (Dr. Shahbaz)	Alteration in wheat (*Triticum aestivum* L.) responses to pre-sowing seed treatment with proline under nickel stress.
202	Tabinda Sahar 2016-ag-6587	ISES (Dr. Yaseen)	Interactive effect of nitrogen and phosphorous fertilizer sources and weedicide with foliar spray of Urea/CAN on root growth and grain yield of maize crop.
203	Sadia Khalid 2020-ag-948	Botany-2022 (Dr. Shahbaz)	Assessment of the use of Moringa leaf extract as foliar spray on wheat (*Triticum aestivum* L.) under nickel stress
204	Hafiza Sadia Ameer 2020-ag-991	Botany-2022 (Dr. Shahbaz)	Application of Thiourea may alter the response of wheat (*Triticum aestivum* L.) under cadmium stress.
205	Sadia Anwar 2020-ag-917	Botany-2022 (Dr. Shahbaz)	Effect of pre-sowing of thiourea on morpho-physiological and biochemical attributes of Spinach (*Spinacia oleracea* L.) under saline regimes.
206	Mishal Mushtaq 2018-ag-481	Botany-2022 (Dr. Shahbaz)	Influence of foliar applied thiourea on spinach (*Spinacia oleracea* L.) under saline conditions.
207	Ali Rizwan 2016-ag-6259	ISES-2022 Dr.Zia- ur - Rehman	Potential application of Silicon in improving growth of maize (*Zea mays* L.) in saline sodic soil using different biogenic and abiogenic sources.
208	Farai Awan 2020-ag-1001	Botany-2022 (Dr. Shahbaz)	Exploring the potential role of Moringa leaf extract as natural plant growth regulator on Spinach (*Spinacia oleracea* L.) under boron toxicity.
209	Shan Ali	Botany-2022	Effect of silicon on Barley (*Hordeum vulgare* L.) under

	2018-ag-505	(Dr. Shahbaz)	cadmium stress.
210	Arbaz Khan 2018-ag-323	Botany-2022 (Dr. Shahbaz)	Role of Glycine betaine in alleviation of deleterious effects of copper on wheat (*Triticum aestivum* L.)
211	Muhammad Bilal Ahmad 2016-ag-8223	ISES-2022 (Dr. Javaid Akhtar)	Physiological response of different bread wheat (*Triticum aestivum* L.) cultivars under salinity stress conditions in solution culture.
212	Sania Kalsoom 2020-ag-1695	Botany-2022 (Dr. Saddam)	Application of Corn Stalk based superabsorbent polymer for enhancing drought stress tolerance in different field crops
213	Iram Jameel 2015-ag-10	Botany-2022 (Dr. Shahbaz)	Assessment of the role of thiourea in safflower (Carthamus tinctorius L.) under water deficit conditions
214	Zyma Basharat 2014-ag-1706	Botany-2022 (Dr. Shahbaz)	Morphophysiological and biochemical responses of Flax (*Linum usitatissimum* L.) to exiguously applied glycine betaine under water deficit conditions
215	Nimra Atta 2017-ag-421	Botany-2022 (Dr. Shahbaz)	Foliar applied proline may alleviate the adverse effects of nickel stress on wheat (*Triticum aestivum* L.)
216	Muhammad Junaid Afzal 2016-ag-6454	Agronomy (Dr. Saddam)	Effect of wheat straw based superabsorbent polymers on morpho-physiological growth of wheat, Maize, and groundnut under different soil moisture regimes.
217	Sehrish Huma Zafar 2016-ag-6552	ISES (Dr. Zahir A. Zahir)	Microbial mediated Phyto stabilization coupled with the biochar and iron oxide nanoparticles for improving growth and yield of Maize.
218	Hafsa 2018-ag-437	Botany-2022 (Dr. Shahbaz)	Effect of foliar application of Moringa leaf extract on Spinach (*Spinacia oleracea* L.) under drought stress conditions.
219	Gule-E- Saher 2020-ag-1708	Botany (Dr. Saddam Hussain)	Optimization of Corn based biodegradable polymer for enhancing drought tolerance in wheat (*Triticum sestivum* L.) and Maize (*Zea mays* L.)
220	Saif Ali 2016-ag-6051	ISES (Dr. Naeem Asghar)	Effect of different abiotic factors on the microbial activity of plant growth promoting Rhizobacteria.
220	Kehkshan 2020-ag-205	ISES (Dr. Zahir A.Zahir	Allelopathic Rhizobacteria along with reduce dose of herbicide may suppress growth of *Dactyloctenium aegyptium* and improve growth of direct seeded Rice.
221	Robina Kausar 2016-ag-6727	ISES (Dr. M. Sabir)	Assessment of particulate matter and nose pollution in different areas of Madina town, Faisalabad.
222	Muhammad Ahmad Arshad 2016-ag-8226	ISES (Dr. M. Sabir)	Comparative response of wheat and Barley to Ni-concentration in alkaline calcareous soil.
223	Rubaz Ahmad 2014-ag-3394	ISES (Dr. M. Sabir)	Comparative effectiveness of Zn as nano zinc oxide, nano zinc sulphate and conventional Zn sulphate and Zn- EDTA in salt affected soils to grow rice crop.
224	Muhammad Mizfar Gohar 2016-ag-6262	ISES Dr. Anwar	Evaluating Physiological and Biochemical Responses of Cotton (*Gossypium hirsutum* L.) against water stress by using organic amendments.
225	Aiman Fatima	Botany-2022	Influence of Gypsum on Flax (*Linum usitatissimum* L.)

	2018-ag-475	(Dr. Shahbaz)	
226	Muhammad Faisal 2006-ag-590	Botany-2022 (Dr. Shahbaz)	Mitigation of Nickle stress in wheat (*Triticum aestivum* L.) through exogenous application of trehalose as foliar spray.
227	Iqra Siddique 2020-ag-1647	Botany-2022 (Dr. Shahbaz)	Trehalose induced modulation in morphological and biochemical attributes of Chickpea (*Cicer arietinum* L.) under drought stress conditions.
228	Afraz Mathiaz 2021-ag-1332	Botany-2023 (Dr. Shahbaz)	Mitigation of chromium $CrCl_3$ toxicity in Canola (*Brassica naps* L.) through foliar application of GA_3
229	Asma Ayub 2021-ag-1330	Botany-2023 (Dr. Shahbaz)	Morph-physiological aspects of Turnip (*Brassica rapa* L.) when gibberellic acid was applied as foliar spray under saline conditions
230	Laraib Sajjad 2017-ag-4430	Botany-2023 (Dr. Shahbaz)	Interactive effect of foliarly applied trehalose and salt stress on canola *(Brassica naps* L.)
231	Ayesha Amin 2017-ag-9963	ISES-2023 Dr. M. Sabir	Estimation of leaching losses of phosphorous in texturally different saline-sodic soils.
232	Nida Allah Rakha 2018-ag-315	Botany-2023 (Dr. Shahbaz)	Modulation in responses of Spinach (*Spinacia Oleracea* L.) by foliar application of thiourea under water deficit conditions
233	Sana Razzaq 2021-ag-1364	Botany-2023 (Dr. Shahbaz)	Foliar applied thiourea (TU) induced alteration in morpho-physiological and biochemical attributes of wheat (*Triticum aestivum* L.) under cadmium stress
234	Amara Zafar 2021-ag-1282	Botany-2023 (Dr. Shahbaz)	Study of morpho-physiological attributes of wheat (*Triticum aestivum* L.) subjected to foliar application of thiourea under copper stress.
235	Hamza Rauf 2021-ag-177	ISES-2023 Dr. Zahir A. Zahir	Evaluation of different application of Rhizogold plus for improving the growth and yield of maize in saline condition.
236	Laiba Tariq 2017-ag-849	Botany-2023 (Dr. Shahbaz)	Influence of pre-sowing seed treatment with thiourea on radish (*Raphanus sativus* L.) subjected to saline conditions
237	Aqsa Zahoor 2016-ag-3684	Botany-2023 (Dr. Shahbaz)	Effect of foliar application of thiourea on growth attributes of Pea (*Pisum sativum* L.) under saline conditions.
238	Aqsa Zainab	ISES Dr. Sabir	Reclamation response and phosphorous leaching from saline sodic soils.
239	Romail Aslam 2017-ag-9553	Agronomy Dr. Saddam	Use of plant based superabsorbent polymers for enhancing the productivity and resource use efficiency of autumn maize
240	Iram Chaudhary 2019-ag-3208	ISES Dr. Gulam Murtaza	Alleviation of adverse effect of salinity stress on cauliflower (*Brassica Oleracea* L.) by foliar application of ascorbic acid.
241	Muhammad Waqas 2017-ag-9318	Agronomy Dr. Saddam	Use of plant based superabsorbent polymers for enhancing the productivity and resource use efficiency of wheat.
242	Sajjad Ahmad 2021-ag-29	Agronomy Dr. Saddam	Field optimization of plant-based polymers for the growth and productivity of wheat.
243	Ayesha Hussain	ISES-2024	Coating DAP with bioherbicide for improving the

	2018-ag-8704	Dr. Zahir	growth and yield of wheat.
244	Aneeza Muzaffar 2022-ag-1257	Botany-2024 Dr. Shahbaz	Efficiency of foliar application of Glycine betaine in Canola (Brassica napus L.) under nickel stress
245	Zainab Akbar 2022-ag-455	ISES-2024 Dr. Sadia	Human health risk assessment by nitrate entry into food chain through waste water cultivated vegetables
246	Maida Fatim 2022-ag-1256	Botany-2024 Dr. Shahbaz	Melatonin mediated regulation in morpho-physiological and biochemical attributes of turnup (*Brassica rapa* L.) under salinity stress
247	Rubab Rizwan 2022-ag-446	ISES-2024 Dr. Sabir	Assessment of metal contamination of soil, water and plants in per-urban areas of Faisalabad
248	Iqra Nazar 2022-ag-1374	Botany-2024 Dr. Shahbaz	Application of methionine as foliar spray om Pea (Pisum sativum L.) under salt stress
249	Yamna Tamreen 2022-ag-1253	Botany-2024 Dr. Shahbaz	Influence of foliar application of SA on carrot (Daucus carota L.) under drought stress conditions
250	Maleeha Ashraf 2018-ag-6878	ISES-2024 Dr. Saif	Canola growth and yield in response to sulfur application in salt affected soils
251	Muhammad Matie-un-Nabi 2022-ag-3000	Botany-2024 Dr. Shahbaz	
252	Nimra Kiran 2022-ag-1355	Botany-2024 Dr. Saddam	Role trehalose priming in enhancing Ramie (Boehmeria nivea) tolerance against salinity stress.
253	Sobia Mahmood 2018-ag-7377	ISES-2024 Dr. Sabir	Effect of different organic amendments on the degradation of acetylsalicylic acid in water
254	Muhammad Mubeen Saghir 2018-ag-6908	Agronomy-2024 Dr. Shahbaz Naeem	Evaluating the comparative effect of different types of manure and fertilizer on growth and yield of canola
255	Ayza Zainab 2022-ag-1324	Botany-2024 Dr. Shahbaz Naeem	Exploring the role of foliar applied organic acids in enhancing Maize (*Zea mays* L.) grain iron concentration
256	Areeba Abdul Khaliq 2022-ag-1323	Botany-2024 Dr. Shahbaz Naeem	Evaluating the effect of ascorbic acid and salicylic acid foliar application on the growth and yield of Maize (*Zea mays* L.) under drought stress
257	Ehtisham Hanif 2022-ag-112	ISES-2024 Dr. Sabir	Growth and yield response of wheat to phosphorous application in texturally different salt -affected soils during reclamation
258	Muhammad Hammad ur Rehman 2018-ag-6680	Agronomy-2024 Dr. Shahbaz Naeem	Optimization of laser treatment duration to improve mustard productivity under salt stress

Ph.D (As Committee Member)

S. #	Name of Student	Year	Title of Thesis
1	Muhammad Zia-ur-Rehman 95-ag-1399	2009/ISES Completed	Bioaccumulation of cadmium in grain crops as affected by inorganic amendments
2	Muhammad Sabir 95-ag-1414	2009/ ISES Completed	Phyto availability of nickel (Ni) in contaminated soils in response to soil-applied amendments
3	Shamim Ahmad 93-ag-1237	2009/Agronomy Completed	Influence of foliar application of nitrogen on drought tolerance of sunflower (*Helianthus annus* L.)
4	Raja Ghulam Muhammad Hur 2001-ag-1091	2012/Agronomy Completed	Ameliorative effects of foliar –applied potassium on cotton (*Gossypium hirsutum* L.) plants exposed to water stress
5	Fahim Nawaz 2003-ag-1820	2014/ Agronomy Completed	Wheat (*Triticum aestivum* L.) response to exogenous selenium supply under drought stress
6	M. Adnan Bukhari 2003-ag-2375	2014/Agronomy Completed	Wheat (*Triticum aestivum* L.) response to exogenous silicon supply under drought stress
7	Rai Altaf Hussain 2003-ag-1512	2014/ Agronomy Completed	Effect of supplemental foliar application of N and K under drought tolerance of sunflower (*Helianthus annus* L.)
8	Muhammad Aftab 2004-ag-1436	2014/ ISES Completed	Alleviation of salinity x boron toxicity by K application in cotton (Gossypium hirsutum L.)
10	Muhammad Yahya Khan 2005-ag-1311	2014/ISES Completed	Microbial assisted phytoremediation of lead (Pb) contaminated soils
11	Waqas-ud-Din Khan 2005-ag-1919	2013/ ISES Completed	Mitigation of salinity stress in maize silicon nutrition
12	Sana Ullah Yasin 2005-ag-1315	2013/ ISES Completed (2016)	Potential impact of Bt. and non-Bt. cotton on rhizophere microbial community, enzymatic activity and cottonseed oil quality.
13	AAmer sajjad 2005-ag-1586	Agronomy/2013 Completed	System productivity and resource use efficiency of Cotton -wheat relay cropping system.
14	Jan Muhammad 2005-ag-1271	ISES/2015 Completed	Efficiency of Zn Utilization in Rice (*Oryza sativa* L.) genotypes under saline conditions
15	Naseem Akhtar 87-ag-1030	2014/ISES Completed	Biocontrol of seedling blight by co-inoculation with microbial consortia.
16	Abid Mahmood 2005-ag-1741	2016/ISES Completed	Effect of biochar in improving the nodulation, growth and yield of Rhizobium inoculated Mung bean (*Vigna radiate* L.)
17	Muhammad Rashid Shaheen 2004-ag-1175	Horticulture/2015 Completed	Evaluation of thermo-tolerance and its enhancement in Tomato (*Solanum lycopersicum* L.)

18	Muhammad Rashid Hussain 2006-ag-1947	Horticulture/2016 Completed	Evaluation of heat-tolerance potential and its enhancement in Okra (*Abelmochus esculentus* L. Moench)
19	Muhammad Azhar 2010-ag-509 Dr. Zia ur Rahman	ISES/2018 Completed-	Phyto-availability of Cadmium to rice and wheat in contaminated soils treated with organic amendments.
20	Muhammad Arfan	Agronomy/2018 Completed	Exogenous application of salicylic acid improves physiological processes of maize (*Zea mays* L.) Hybrids under limited water conditions
21	Yasmin Sarwar 2002-ag-1235 Dr. Muhammad Shahbaz	Botany/2018 Completed	Modulation in growth, physiological and biochemical attributes of sunflower (*Helianthus annus* L.) by GR24 application under saline stress.
22	Syed Mohsin Abbas 2000-ag-1039	Agronomy/2018 completed	Effect of salicylic acid on bio- productivity and drought tolerance potential of marigold *(Tagetes erecta* L.)
23	Maria Naqve 2012-ag-73	Botany/2018 completed	Response of Okra [Abelmoschus esculentus (L.) Moench] to exogenous application of alpha tocopherol as foliar application and pre seed treatment under saline conditions.
24	Maham Saddique	Botany/2018 completed	Response of eggplant (*Solanum melongena* L.) to exogenously applied alpha tocopherol under drought stress conditions
25	Sajida Azhar 2033-ag-2350	ISES/2019	Interactive effect of nitrogenous fertilizer and salinity on growth and oil quality of soybean (Glycine *max* L.)
26	Abida Abid 2012-ag-34	Botany/2021	Influence of exogenously applied trehalose on Flax (*Linum usitatissimum* L.) under drought stress conditions.
27	Zunaira Riaz 2013-ag-390	Botany/2021	Modulation in Cotton (Gossypium hirsutum L.) attributes by exogenous application of thiourea under saline conditions.
28	Misba 2012-ag-644	Botany/2021	Alteration in morphological, physiological, and biochemical attributes of cotton (Gossypium *hirsutism* L.) in response to exogenous application of thiourea under water deficit conditions
29	Muhammad Luqman 2012-ag-08	Botany/2021	Variation in morpho-physiological and biochemical attributes of maize (*Zea mays* L.) to exogenously applied strigolactone (GR24) as foliar spray and pre-seed treatment under drought stress conditions.
30	Hafiza Iqra Khalid 2010-ag-2022	ISES/2022 Dr. Gulam Murtaza	Synthesis and application of nanoparticles for remediation of cadmium contaminated soil during wheat growth.
31	Imran Abdullah 2015-ag-1414	Botany (Dr. Mansoor Hameed)	Distribution, Ecology, and adoptive components in Rhazya Stricta Decne. from different ecological regions

32	Muhammad Ashar Ayub 2011-ag-3001	ISES/2024 Dr. Hammad Raza	Effect of cerium oxide nanoparticles on growth response of Maize and Wheat in cadmium contaminated soil.
33	Tasawar Ali 2006-ag-1965	ISES/2024 Dr. Javed Akhtar	Quantification of bioavailable Zinc in wheat (*Triticum aestivum* L.) under saline conditions
34	Abida Abid 2012-ag-34	Botany/2024 (Dr. Shahbaz)	Influence of exogenously trehalose on flax (*Linum usitatissimum* L.) under drought stress conditions.
35	Zyma Basharat 2014-ag-1706	Botany/2024 (Dr. Shahbaz)	Morhpo-physiological and biochemical responses of flax (*Linum usitatissimum* L.) to exogenously applied glycine betaine under water deficit conditions
36	Mudassar Nadeem 2015-ag-2403	Botany/2024 (Dr. Shahbaz)	Response of wheat (*Triticum aestivum* L.) to exogenous applied β- carotien and Gibberellic scid (GA_3) under salt stress
35	Sobia Akram 2004-ag-1353	ISES/2024 Dr..Anwar ul Haq	Exogenously applied silicon and salicylic acid to grow wheat (*Triticum aestivum* L.) crop during salinity stress