



Dr. Quahir Sohail



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Curriculum vitae

A result-oriented enthusiastic scientist; having expertise in Plant Breeding, Plant Physiology, Genetics, Genomics, Molecular Breeding, Bioinformatics, Agronomy, Genetic Recourses Management, with experience in International Organizations across various countries.

Academics / Education

Ph.D. Molecular Breeding and Plant Physiology;

(Arid Land Research Center Tottori), Tottori University - Japan (03/2012) (*Molecular genetics and physiological studies for drought tolerant wheat production*).

M.Phil. Biotechnology and Genetic Engineering;

The University of Agriculture Peshawar Pakistan (03/2006) (*Molecular evaluation of elite wheat lines selected for rust resistance and yield potential*).

B.S. Plant Breeding and Genetics;

The University of Agriculture Peshawar (01/2004).

High School;

University Public School, University of Peshawar Pakistan (1996).

Elementary School;

Martin Luther King School; Champaign Urbana Illinois USA (1990).

Languages spoken

English: (ESL) courses 1986 to 1988 (Martin Luther King School Champaign Urbana Illinois, USA).

English language test (TOEIC) score 955 out of 990 having 99 percentile (2011).

Pashto: Native language.

Urdu: National language.

Japanese: Intensive Language course, Tottori University Japan, 04/2008 - 09/ 2008.

Professional experience with description of duties at different positions

Associate Professor; Institute of Biotechnology and Genetic Engineering, The University of Agriculture Peshawar, Pakistan (09/2016 – till date).

- Germplasm development and evaluation for biotic and abiotic stresses, through- physiological and molecular approaches.
- Accelerating the genetic gain and biofortification of germplasm through- classical and genomics and molecular breeding techniques.
- Trait /gene discovery in landraces, synthetic wheat, hybrid wheat, wild relatives and introgression of these traits in the cultivated gene pools.
- Improving fertilizer use efficiency by screening germplasm for enhanced nutrient uptake and mineral deposition.
- Conducting Genome Wide Association Mapping (GWAS) and Bi-Paternal mapping using bioinformatic tools and statistical softwares.
- Studying the physiological responses of germplasm of different FIGS (Focused Identification of Germplasm Strategy) subsets.
- Member of the Varietal Development and Patent Registration committee of the University of Agriculture Peshawar.
- Member of the Board of Studies (Post graduate thesis evaluation committee)
- Capacity development of junior scientists and students.

Post Doc. Researcher; Mohammed VI Polytechnic University, Ben Guerir, Morocco (02/2021- 01/2023).

- Designing and implementing field and controlled conditions experiments on plant high throughput phenotyping under different environments (drought, high temperature, low nutrients' conditions, etc.)
- Phenotyping legumes, cereals and fruits trees.
- Developing innovative remote sensing/automated crop phenotyping methods.
- Contribution in building UM6P high throughput lysimetric platform for plant phenotyping and screening.
- Training researchers to develop germplasm using breeding methods such as MAGIC population development, Multiple Synthetic Derivatives methods etc.

Visiting Scientist; Çukurova University; Adana, Turkey (Molecular Genetic group) (06/2018 – 08/2018).

- Analyzing genomic and molecular data using various bioinformatic tools and statistics software.

- Physiological traits-based screening of germplasm under heat and drought for Western and Central Asia.
- Guiding and training students in GWAS, molecular and bioinformatic techniques.
- Writing publications.

Consultant; International Maize and Wheat Improvement Center (CIMMYT) & the International Winter Wheat Improvement Program, Ankara, Turkey (01/2016 - 08/2016).

- Agronomic and physiological screening of germplasm for soil-borne diseases and low nutrients availability.
- Data analysis and interpretation (physiological, molecular and agronomic).
- Genome Wide Association Studies (GWAS) for physiological traits related to cold and drought.
- Formulating the winter wheat breeding scheme for soil borne pathogens.
- Writing, proofreading and editing scientific research reports/publications.

Associate Scientist / Wheat Breeder; International Center for Agriculture Research in the Dry Areas (ICARDA), Rabat Morocco and Ankara Turkey (03/2013 - 12/2015).

- Leading the ICARDA's Global winter wheat breeding and pre breeding program.
- Diversification of germplasm through hybridization/utilization of wild relatives of wheat, synthetic hexaploid wheat.
- Breeding and developing varieties by pyramiding physiological traits through classical breeding and Marker assisted breeding
- Trait/gene identification through Genome Wide Association Studies (GWAS)
- Managed projects with a focus on financial oversight, ensuring alignment with key objectives and successful outcomes
- Training and mentoring young scientists.
- Collaborations with public and private universities, research institutes and international research originations. (Food and Agriculture Organization (FAO), Japan International Cooperation Agency (JICA), Turkish ministry of Agriculture and Forestry (Tarım ve Orman Bakanlığı) and TAGEM (General Directorate of Agricultural Research and Policies).

Postdoc; Kihara Institute for Biological Research; Yokohama, Japan (04/2012 – 03/2013).

- Working with the Science and Technology Research Partnership for Sustainable Development (SATREPS), in collaboration with the Japan International Cooperation Agency (JICA), to develop germplasm for Afghanistan.

- Managing and collecting genetic resources and screening them (physiology, quality) for abiotic and rust in Japan, Mexico, Afghanistan and Turkey.
- Screening germplasm for fertilizer use efficiency under different soil types, fertilizer dose and environmental conditions.
- Conducting association mapping studies, genomic selection, genetic diversity analysis.
- Implementation of the FIGS (Focused Identification of Germplasm Strategy).
- Conducting trainings and workshops for young scientists.
- Bringing various stake holders working in Afghanistan for Agriculture Research with the Food and Agriculture Organization (FAO), Japan International Cooperation Agency (JICA), International Center for Agriculture Research in the Dry Areas (ICARDA), International Maize and Wheat Improvement Center (CIMMYT) and Ministry of Agriculture, Irrigation, and Livestock (MAIL) Afghanistan.

Research interests

- Breeding and developing germplasm.
- Plant stress resistance/tolerance, Plant stress physiology, germplasm screening, trait discovery and deployment, Genetics and genomics (MAS, GWAS, BPM, etc.).
- Pre-Breeding, utilization of wild crop relatives, landraces and for trait interrogation in to the cultivated gene pool.
- Fertilizer use efficiency, nutrient uptake and mineral deposition
- Field and controlled conditions phenotyping and screening, high throughput phenotyping.
- Germplasm collection, Agro-biodiversity, forgotten crop species, crop wild relatives.
- Project management, farm management, gene bank maintenance.
- Focused Identification of Germplasm Strategy (FIGS).

Partnership development

- Led the collaboration and partnership between Mohammed VI Polytechnic University, Ben Guerir, Morocco the Arid Land Research Center, Tottori University – Japan
- Initiated a partnership with JICA-Morocco for research funding and students exchange support between Morocco and Japan.
- Established a collaboration between International Center for Agriculture Research in the Dry Areas and Kihara Institute for Biological Research; Yokohama, Japan.
- Established a collaboration between ICARDA- Turkey and Arid Land Research Center Tottori University Japan.

Formal teaching activities (undergraduate and graduate programs)

- Plant breeding
- Genetic resources and conservation
- Agricultural Biotechnology
- Modern phylogenetics and evolution
- Computational, functional and evolutionary Genomics
- Quantitative and statistical genomics
- Biometrical genetics
- Principles of genetics
- Plant physiology
- Research methodology
- Plant diversity

Workshop and trainings organized / participated as resource person

- Participated in Workshop on Innovative approaches for wheat productivity enhancement in Pakistan at National Agricultural Research Council (NARC), Islamabad- Pakistan May 06, 2025.
- Participated as resource person in a workshop on “High throughput plant phenotyping of crops: Phenomics advance for food security and climate resilience” February 13, 2025. Department of Agronomy, Abdul Wali Khan University Mardan- Pakistan
- Sohail Q., Genome wide association mapping and plant physiology for wheat improvement. Two-day training workshop on Genetic and Genomic approaches for wheat production advancement. 16-17 February 2022. Department of Agriculture, Hazara University Mansehra- Pakistan.
- Member of organizing committee of the conference titled “International conference on strategies for ensuring food security in the changing climate” October 23-24, 2019. The University of Agriculture Peshawar, Pakistan
- Organized and conducted a training course titled “Training Course on Classical and Molecular Approaches in Wheat Breeding” at the Institute of Biotechnology and Genetic Engineering, The University of Agriculture Peshawar, Pakistan, 29-30 January 2019, sponsored by Pakistan Science Foundation.
- Conducted a training course for International Atomic Energy Agency (IAEA), on “Methodologies and mechanisms for screening against biotic and abiotic stresses” 08-19 May 2016, Muscat, Sultanate of Oman.
- Participated as an organizer in the International Winter Wheat Traveling Seminar, 24-29 May 2015, Azerbaijan and Georgia as a resource person (presented Winter Wheat Pre-breeding: priorities and methodology).

- Participated as an organizer in IWWIP (International Winter Wheat Improvement Program) visitor's week June 7–12, 2015, Turkey (Edirne, Sakarya, Eskisehir, Konya and Haymana, etc. in Turkey).
- Participated as resource person in the training titled “Classical and molecular approaches in wheat breeding April 7-25, 2014, Rabat, Morocco.
- Participated as resource person in the training titled “Genotyping and Association Mapping of Multiple Traits in Barley (*H. vulgare* L.), and Selection of Barley Germplasm”, 23-26 April 2014, Rabat-Morocco.
- Organized and participated as a resource person in Science and Technology research partnership for sustainable development (SATREPS) Project Wheat Research Workshop Series. Titled “Planning and Conducting Experiments” held in MAIL, Kabul, Afghanistan 14-16 October 2012.
- Participated as resource person in the training titled “SATREPS Afghanistan Wheat Project Counterpart short term training” held in Kihara Institute for Biological Research, Yokohama City University Japan. 27 May to 9 June 2012

Awards and scholarships

- Japanese government scholarship (MEXT) for PhD studies (2009-2012).
- Merit scholarship University Agriculture Peshawar, Pakistan (2000 to 2004).

Professional training

- Participated in Workshop on Innovative approaches for wheat productivity enhancement in Pakistan at National Agricultural Research Council (NARC), Islamabad- Pakistan May 06, 2025.
- Participated in a workshop on CRISPR/Cas Genome Editing Technology arranged by Center of Omic Sciences, Islamia College Peshawar, May, 2019.
- Attended a workshop on integration of ICT in Agriculture and Applied Research, Arranged by The University of Agriculture, Peshawar and ORIC held at The University of Agriculture, Peshawar, February 21, 2019.
- Attended a workshop on Intellectual Property Rights, Arranged by The University of Agriculture, Peshawar and Directorate of Science and Technology (DoST), held at The University of Agriculture, Peshawar, Pakistan December 19, 2016.
- Participated in Statistics workshop 2-3 September 2015, organized by CIMMYT, GRDC (Grain Research Development Corporation) Australia, held in Eskisehir, Turkey.
- ALRC Scientific Research Writing Workshop held at the Arid Land Research Center Tottori University, Tottori, Japan. 28-29 March 2011.
- Genetic transformation and DNA marker application for Crop Improvement, The International Center for Agriculture Research in the Dry Areas (ICARDA) Aleppo, Syria, 8-19 November, 2009.

- Scientific Writing and Presentation. Khyber Pakhtunkhwa Agricultural University Peshawar, Sponsored by Higher Education Commission, Islamabad, 7 -18 January 2008.
- National training course in Biotechnological techniques for crop improvement, Institute of Biotechnology and Genetic Engineering, Khyber Pakhtunkhwa Agricultural University Peshawar, 12-17 September 2005.
- Computer short course. Brains Degree College Peshawar. August 1999 to October 1999, Arranged by Skill Development Council, Islamabad Pakistan.
- English as a secondary language (ESL) course in Martin Luther King School, Illinois, USA 1986 to 1988.

Societal membership associated activities

- Member of Asian Federation of Biotechnology
- Member of Japan Alumni Global Network

Supervision of PhD/M.Sc. students

- Enhancing phosphorus fertilizer use efficiency in crops: investigating physiological, molecular, and agronomic pathways; Ayesha Sadaat (In progress)
- Molecular and biochemical characterization of newly developed wheat genotypes; Shaban Afridi (2025)
- Identification of Markers associated with agronomic traits in Synthetic Hexaploid Wheat; Atta Ul Wahab (2024)
- Marker assisted screening of wheat (*Triticum aestivum* L.) lines for stripe rust; Basit Ali (2024)
- Genetic analysis for yield and drought related traits in 8×8 straight diallel wheat populations; Haleema Bibi (In progress)
- Agronomic performance and grain mineral deposition of wheat under drought and salinity stress Syed; Haris Shah (2023)
- Genome wide association studies for agronomic traits in wheat; Manahil Tariq (2022)
- Genome wide association studies grain yield related traits in bread wheat; Haseena Khalid (2022)
- Effects of plant growth regulators on wheat at morphological, cellular and molecular level; Amer Javed (2022)
- Genetic and Biochemical Analysis of advanced barley lines; Iqra Muslim (2020)
- Molecular and Biochemical Screening of barley genotypes under drought stress; Samavia Zia (2019)
- Molecular and Biochemical characterization of barley genotypes under drought stress; Shakirullah (2019)
- Genetic diversity in exotic oat germplasm and resistance against barely yellow dwarf rust; Shazma Firdos Jan (2019)

- Agronomic and molecular assessment of advance barley lines for cultivation under water scarce conditions; Maria Munir (2019)
- Study of the chlorophyll content and different developmental stages in AHL15GR transgenic tobacco lines; Huria Javed (2019)
- Study of the nicotine content at different growth stages in in AHL15GR transgenic tobacco lines; Nayab Ali (2019)
- Genetic and biochemical analysis of advanced barley lines; Sajida Jamal (2018)
- Marker assisted screening of wheat lines for drought tolerance; Yusra Qazi (2018)
- Molecular and agronomic evaluation for leaf rust resistance; Bibi Amna (2018)
- Molecular and agronomic evaluation of wheat lines for leaf rust resistance using SSR markers; Salma Liaquat (2018)

Supervision of Undergraduate Students

- Genome wide association studies for drought tolerance traits in wheat; Zalah Tariq Jan (2026)
- Population structure of a collection of bread wheat; a structure-based analysis; S.M. Hussain Zaidi (2026)
- Phylogenetic analysis of evolutionary relationships among wheat genotypes using molecular markers; Tanzeela Khan (2026)
- Wheat head counting in remote sensing for yield prediction using YOLO V5 and CASCADE R-CNN; Ayesha Saadat (2023)
- Wheat head counting in remote sensing for yield prediction using YOLO V5 and FASTER R-CNN; Muhammad Abuzar Faiq (2023)
- Effect of Caffeine on plant development; Mansoor Ahmad (2023)
- Analysis of BMP-15 gene and association with litter size in sheep breeds of Khyber Pakhtunkhwa; Owais Khan (2023)
- Basic techniques in Biotechnology; Muhammad Usman (2023)
- Plant breeding for drought stress under the changing climate; Muhammad Farhan (2021)
- Status of Genome Wide Association Mapping (GWAS) in plants, animals and humans; Ayesha Ilyas (2021)
- Physiological and molecular assessment of different wheat varieties under drought stress conditions; Umair Munir (2021)
- Studying the effects of plant growth regulators on brassica; Abdul Moiz Ali (2020)
- Studying the Protein content of different wheat cultivars; Zakirullah (2019)
- Physiological and molecular assessment of different wheat varieties under salinity stress conditions; Salman Ahmad (2019)

List of publications of Dr. Quahir Sohail

Research papers published in ISI Journals

- Traore F. F., **Q. Sohail**, A. El Allali, Y. S. A. Gorafi, K. Hejjaoui, A. Hamwiah, T. Istanbuli, S. Boughribil and M. Amri. Multi-Model Genome-Wide Association Study Reveals Molecular Markers Associated with Agronomic Traits in a Kabuli chickpea (*Cicer arietinum* L.) MAGIC-Subset Population Under Different Mediterranean Environments. *Frontiers in Plant Science*. 17:1860578. DOI: 10.3389/fpls.2026.1860578
- Hafsa Naheed, Hidayat Ur Rahman, Nadia Khan, Aziz Ur Rahman, Moez Amri, **Q. Sohail**. (2026) Additive main effect and multiplicative interaction analysis for agronomic performances in bread wheat (*Triticum aestivum* L.) Advanced lines across multiple environments. *Euphytica* 222:93. DO: 10.1007/s10681-026-03744-3
- Rouichi, S., O. Idrissi, **Q. Sohail** H. Marrou, T. R. Sinclair, K. Hejjaoui, M. Amri, M. E. Ghanem (2023) Limited-transpiration trait in response to high VPD from wild to cultivated species: Study of the Lens genus. *Journal of Experimental Botany*. 74 (16). DOI: 10.1093/jxb/erad070
- Cudjoe, D.K., F.G. Okyere, N. Virlet, M. Castle, P. Buchner, P. Parmar, A. Riche, **Q., Sohail**, M. Mhada, M.E. Ghanem, T.W. Waine, F. Mohareb, and M.J. Hawkesford, (2023). Using proximal sensing parameters linked to the photosynthetic capacity to assess the nutritional status and yield potential in quinoa. *Acta Horticulturae*. 1360, 373-379. DOI: 10.17660/ActaHortic.2023.1360.45
- **Sohail Q.**, G. Erginbaş-Orakçı, F. Ozdemir, A. Jighly, S. Dreisigacker, Hakan Ozkan, A.A. Dababat. (2022) Genome wide association study of root lesion nematodes *Pratylenchus* species and crown rot *Fusarium culmorum* in bread wheat. *International Journal of Molecular Sciences*. ISSN 2075-1729. DOI: 10.3390/life12030372
- Traoré F.F, A. El-Bouchi, Y. En-nahli K. Hejjaoui, M.L. Metougui, A. Hamwiah, **Q. Sohail**, T. Istanbuli, S. Boughribil, M. Amri (2022). Exploring the genetic variability and potential correlations between nutritional quality and agro-physiological traits in Kabuli chickpea germplasm collection (*Cicer arietinum* L.). *Frontiers in Plant Science*. 13:905320. DOI: 10.3389/fpls.2022.905320.
- SafiUllah, M.N Khan, S. Salahuddin, M. Tayyab, T. Mehmood, Israr U, M. Khan, **Q. Sohail**, M. Akram (2022) Targeted metabolomics reveals fatty acids abundance adjustments as crucial role in drought stress response and post-drought recovery in wheat. *Front. Genet. – Plant Genomics*. DOI:10.3389/fgene.2022.972696.
- Erginbas-Orakci G., D. Sehgal, **Q. Sohail**, F. Ogbonnaya, S. Dreisigacker, S. R. Pariyar and A. A. Dababat. (2018) Identification of novel quantitative trait loci linked to crown rot resistance in spring wheat. *International Journal of Molecular Sciences*. 19:266. DOI: 10.3390/ijms19092666
- Naheed H., Raziuddin, Farhatullah, **Q. Sohail**, N. Khan (2017) Genetic analysis for yield and yield components in rapeseed. *Turkish Journal of Agricultural and Natural Sciences*4 (4): 376-384.

- Beyhan A., **Q. Sohail**, R. Ünsal, N. Dincer L. Dimer, H. Geren, I. Sevim, S. Orhan, S. Yaktubay, A. Morgounov (2017) Genetic gains in grain yield in spring wheat in Turkey. Turk. J. Agric. For. 41: 103-112. DOI: 10.3906/tar-1611-50
- Naheed H., Raziuddin, S. Abid, **Q. Sohail**, G. Hassan, M. Arif (2017) Heritability and combining ability of vegetative growth and phenological development of diallel crosses of rapeseed GENETIKA, 49:1:117-126. DOI: 10.2298/GENSR1701117N
- Naheed H., F. Mohammad, **Q. Sohail**, S. Abid, and N. Khan (2016) Genetic diversity of bread wheat lines based on agro-morphological traits International Journal of Agriculture and Biology. 18: 1049–1055. DOI: 10.17957/IJAB/15.0225
- Tadesse W., F. C. Ogbonnaya, A. Jighly, M. Sanchez-Garcia, **Q. Sohail**, S. Rajaram, and M. Baum (2015). Genome-wide Association Mapping of Yield and Grain Quality Traits in Elite Winter Wheat Genotypes Targeted to the CWANA region. PLoS ONE. 10: e0141339. DOI: 10.1371/journal.pone.0141339
- **Sohail Q.**, A. Manickavelu and T. Ban (2015) Genetic diversity analysis of Afghan landraces using DArT markers. Genetic Resources and Crop Evolution. 62(8): 1147-1157. DOI: 10.1007/s10722-015-0230-9.
- Tsujimoto H., **Q. Sohail**, Y. Matsuoka. Broadening the genetic diversity of common and durum wheat for abiotic stress tolerance breeding (2015) In. Ogihara Y., T. Shigeo, H. Hirokazu (eds.) Advances in Wheat Genetics: From Genome to Field. Springer publishing pp 233-238. DOI: 10.1007/s10722-015-0230-9
- **Sohail Q.**, T. Shehzad, A. Kilian, A.E. Eltayeb H. Tanaka and H. Tsujimoto (2012) Population structure and diversity in *Aegilops tauschii* assessed by diversity array technology (DArT) markers. Breeding Science, 62: 38-45. DOI: 10.1270/jsbbs.62.38
- **Sohail Q.**, T. Inoue, H. Tanaka, A.E. Eltayeb, Y. Matsuoka and H. Tsujimoto. (2011) Applicability of *Aegilops tauschii* drought tolerance traits to breeding of hexaploid wheat. Breeding Science, 61: 347-357. DOI: 10.1270/jsbbs.61.347
- Ahmad A., Z. Ahmad, W. Ali, **Q. Sohail** and I. Khan (2007) Assessment genetic diversity of local and exotic *Brassica napus* germplasm. Pakistan Journal of Biological. Sciences. 10: 2490-2494. DOI:10.3923/pjbs.2007.2490.2494
- Amanullah A., A. Khan, K. Nawab and **Q. Sohail** (2006) Performance of Promising Common Bean (*Phaseolus vulgaris* L.) Germplasm at Kalam-Swat. Pakistan Journal of Biological Sciences, 9: 2642-2646. DOI: 10.3923/pjbs.2006.2642.2646

List of edited/authored books and book chapters

- Sohail Q. H. Naheed and R. Muhammadi. Book chapter (Breeding and Genetic Enhancement of Dryland Crops in M. Farooq and K.H.M. Siddique (eds.) (2016) Dryland Agriculture Springer-Verlag Berlin Heidelberg publishing. DOI: 10.1007/978-3-319-47928-6_10.
- Tadesse W., A. Amri, F.C. Ogbonnaya, M. Sanchez-Garcia, Q. Sohail, M. Baum. (2015) Chapter

2: Wheat. Pages 81-124. In M. Sing and H. D. Upadhyaya. Genetic and Genomic Resources for Grain Cereals Improvement. Academic Press doi:10.1016/B978-0-12-802000-5.00002-2.

- Tadesse, W., S. Rajaram, F. C. Ogbonnaya, M. Sanchez-Garcia, Q. Sohail and M. Baum (2014). Wheat: Challenges and Prospects in the 21st Century. M. Singh, S. Kumar (eds.), Broadening the Genetic Base of Grain Cereals. Springer- India. DOI: 10.1007/978-81-322-3613-9_2
- Jan, M.T., P. Shah, P. A. Hollington, M. J. Khan and Q. Sohail (2009) Agriculture Research: Design and Analysis – A monograph. Published by NWFP Agricultural University, Peshawar.

Papers in Proceedings of Conferences, Meetings and Symposia

- Atta Ul Wahab and **Q. Sohail**. Identification of markers associated with agronomic traits in Synthetic Hexaploid wheat. International Conference on; Recent advances in green biotechnology and climate resilience. Shaheed Benazir Bhutto University, Sheringal, Dir Upper, Pakistan. September 8-9, 2025.
- Basit A., H. Ahmad and **Q. Sohail**. Marker Assisted Screening of Wheat (*Triticum Aestivum*) for strip rust resistance. International Conference on; Recent advances in green biotechnology and climate resilience. Shaheed Benazir Bhutto University, Sheringal, Dir Upper, Pakistan. September 8-9, 2025.
- Traore F. F., , A. Allali, K. Hejjaoui, A. Hamwieh, T. Instanbuli, S. Boughribil, M. Amri. Genome-Wide Association Studies (GWAS) revealed markers associated with agronomic traits in the MAGIC-Subset Chickpeas (*Cicer arietinum* L.) population. The African Plant Breeding Association Conference. Mohammed VI Polytechnic University. Benguerir, Morocco. October 23-26, 2023
- Rouichi, S., Omar Idrissi, **Q. Sohail**, H. Marrou, T. R. Sinclair, K. Hejjaoui, M. Amri, and Michel E. Ghanem. Water-conservation trait from wild to cultivated species: Study of Lens genus The African Plant Breeding Association Conference. Mohammed VI Polytechnic University. Benguerir, Morocco. October 23-26, 2023
- Traore F. F., **Q. Sohail**, A. Allali, K. Hejjaoui, A. El-Baouchi, A. Hamwieh, T. Instanbuli, S. Boughribil, M. Amri. Effect of Genetic variation on the nutritional value of a MAGIC-Subset chickpea (*Cicer arietinum* L.) Population under Mediterranean Environments. The African Plant Breeding Association Conference. Mohammed VI Polytechnic University. Benguerir, Morocco. October 23-26, 2023
- **Q. Sohail**, High throughput phenotyping and plant breeding. International Conference on Sustainable Agriculture and Food Security, August 27-31, 2023.
- **Sohail. Q.**, Moez Amri. Michel E. Ghanem, Manal Mhada, Manal El Akrouchi, Adil Elbaouchi, Kamal Hejjaoui, Bruno Gerard, Moez Amri. Drought research in the dry areas of Africa: the case of PHENOMA the high throughput phenotyping platform in Morocco. IPPS 2022 7th International Plant Phenotyping Symposium 'Plant Phenotyping for a Sustainable Future' Wageningen, the Netherlands September 26-30, 2022
- **Sohail. Q.**, Moez Amri. Plant phenotyping: the turbo charging of plant breeding programs, UM6P Phenotyping Day, Mohammed VI Polytechnic University, Ben Guerir, Morocco 22 May 2022.

- Cudjoem D. K., F.G. Okyere, P. Sadeghi- Tehran, A. Riche, **Q. Sohail**, M. Mhada, M. Ghanem, T.W. Waine, F. Mohareb and M.J. Hawkesford Using proximal sensing parameters linked to the photosynthetic capacity to assess the nutritional status and yield potential in quinoa. 31st International Horticultural Congress at the Congress center in Angers, France from 14-20 August 2022.
- Cudjoem D. K., F.G. Okyere, N. Virlet, M. Castle, S. Parmar, Latifa Greche, A. Riche, **Q. Sohail**, M. Mhada, T.W. Waine, F. Mohareb and M.J. Hawkesford. Phenotyping the nutritional status and crop performance in wheat using proximal and UAV-based remote sensing. D The 75th Anniversary Conference of the International Fertilizer Society on plant nutrition and fertilizer production from 6-9 December 2022.
- Cudjoem D. K., G. Okyerem N. Virlet, M. Castle, P. Sadeghi-Tehran, P. Buchner, A. Riche, **Q. Sohail**, M. Akrouchi, M. Mhada, M. Ghanem, T.W. Waine, F. Mohareb and M. J. Hawkesford, Phenotyping the nutritional status of crops using remote sensing technologies SAFA 2022 Annual SAFA Researcher Workshop Mohammed VI Polytechnic University Morocco 9 -13 May 2022.
- **Sohail Q.**, Genomic tools for crop improvement in the changing climate. International conference on strategies for ensuring food security in the changing climate” The University of Agriculture Peshawar Pakistan. October 23-24, 2019.
- Balouch F. S., **Q. Sohail**, M. A. Nadeem, G. Cömertpay, R. Hatipoglu. Future breeding strategies for dealing with climate change. International Conference on Climate Smart Agriculture; the Way of Farming for 21st Century, MNS University of Agriculture Multan, Pakistan, October, 8-9, 2018.
- **Sohail Q.**, Breeding wheat for climate change. Conference on ‘Climate Change Threats to Food Security’ 2017, Department of Agronomy, The University of Agriculture, Peshawar Pakistan, November 22 – 24, 2017.
- **Sohail Q.**, Wheat breeding: priorities and methodology, International Conference on "Innovations in Agriculture" at Institute of Biotechnology and Genetic Engineering, The University of Agriculture Peshawar, Pakistan March 28-29, 2017.
- **Sohail Q.**, Pre-breeding in wheat and its impact on wheat breeding, IWWIP Annual Meeting. Kastamonu Ilgaz, Turkey January 12-15, 2015.
- **Sohail Q.**, K. Mesut, Cooperative Research Activities of ICARDA for Traditional Germplasm Conservation and Utilization in Turkey. Strategic Workshop of Germplasm Conservation and Utilization for Re-establishing the National Plant Genetic Resource Department in MAIL, Afghanistan and Follow-up meeting of SATREPS Joint Coordination Committee (JCC) and International Donor Coordination Establishment. Ankara, Turkey. August 27 - 28 2015.
- Sanchez-Garcia M., **Q. Sohail**, F.C. Ogbonnaya, W. Tadesse. Genetic variation and association mapping of grain quality traits in elite winter wheat genotypes. EUCARPIA Cereals Section – I T M I Joint Conference, Wernigerode, Germany June 29 - July 4, 2014.
- Tadesse W., O. Abdalla, S. Rajaram, F. C. Ogbonnaya, A. Hagra, M. Keser, R. Sharma, K. Nazari, M. Sanchez-Garcia, **Q. Sohail**, A. Al-Abdallat, and M. Baum. Bread wheat breeding for yellow rust resistance at ICARDA: Current status and prospects. Second International

Yellow Rust Conference, Izmir, Turkey. April 28–May, 2014.

- Manickavelu A, **Q. Sohail**, M. Matsui, Y. Kondo, H. Tsujimoto and T. Ban. Ph(G)enomics characterization and enhancement of Afghan wheat landraces. 3rd International Symposium on Genomics of Plant Genetic Resources “A Gateway to the New Era of Global Food Security”. GPGR3 Organizing Committee, Jeju, Korea, April 19, 2013.
- **Sohail Q.**, A. Manickavelu and T. Ban. Molecular Evaluation of Afghan wheat land races. The Seventh *Triticeae* Meeting of Japan, 2012, November 28- 29, 2012 Tsukuba, Japan.
- Manickavelu A., M. Arifi, **Q. Sohail**, Y. Naruoka, K. Komatsu, Y. Kondo and T. Ban. Reconstruction of Wheat Breeding in Afghanistan: I. Strategy and pilot study. 122nd meeting of the Japanese Society of Breeding Kyoto, Japan September 14-15, 2012.
- **Sohail Q.**, A.E. Eltayeb, and H. Tsujimoto. Use of the Germplasm of wild species, *Aegilops tauschii*, for breeding drought tolerant wheat. 121st meeting of the Japanese Society of Breeding Tochigi, Japan March 29-30, 2012.
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- **Sohail Q.**, T. Inoue, H. Tanaka, A.E. Eltayeb, and H. Tsujimoto. Exploiting the diversity of *Aegilops tauschii* for drought tolerant wheat production. The Sixth *Triticeae* Meeting of Japan, Yokohama, Japan, November 25-26, 2011.
- **Sohail Q.**, T. Inoue, H. Tanaka and H. Tsujimoto. Expression of drought-related traits of *Aegilops tauschii* accessions and their corresponding Synthetic Hexaploid wheat. In: El-Beltagy, A.S. and M. Saxina (Eds.). Meeting the Challenge of Sustainable Development in Drylands under Changing Climate. Proceedings of the 10th International Conference on Development of Drylands, International Dryland Development Commission (IDDC), Cairo, December 12-15, 2010.

Submitted papers

- Basit Ali, Atta Ul Wahab, Muhammad Shaban Afridi, Hilal Ahmad and Q. Sohail. Marker assisted screening of wheat (*Triticum aestivum* L.) genotypes for stripe rust resistance. (submitted to Annals of Agricultural Science and Technology)
- Shakir Afridi, Samavia Zia, and Q. Sohail. Molecular and phenotypic characterization of barley genotypes under drought stress condition (submitted to Genetic Resources and Crop Evolution)
- Ihsanullah Daur, Q. Sohail and Esha Raheem. Nutraceutical Potential of *Caralluma* across Ecological Gradients (submitted to Saudi Journal of Biological Sciences)
- Atta ul Wahab, Q. Sohail and Hafsa Naheed. Genome Wide Association Studies of Physiological traits in wheat. (Submitted to Sarhad Journal of Agriculture)

Conferences/ meeting attended in addition to the above

- II. International Plant Breeding Congress and EUCARPIA-Oil and Protein Crops Section Conference. Antalya, Turkey. November 1-5, 2015.
- The 12th Conference of the Parties to the United Nations Convention to Combat Desertification (UNCCD) (Cop 12), Ankara, Turkey. October 12-23, 2015.
- The 5th International Cereal Nematode Initiative (ICNI) Workshop held in Ankara, Turkey, on 12-16 September 2015.
- 2014 BGRI workshop and Borlaug summit on wheat for food security Cd. Obregon, Sonora, Mexico. March 22-28, 2014.

Management positions

- Managing the varietal cereal development program (2017-till date)
- Member of the Varietal Development and Patent Registration committee of the University of Agriculture Peshawar
- Farm manager; The Institute of Biotechnology and Genetic Engineering, The University of Agriculture Peshawar, Pakistan (01/2017 – 004/2019)
- Was in the committee to establish a high throughput phenotyping lysimetric platform for plant phenotyping, nutritional quality platform, growth chambers and speed breeding platform at Mohammed VI Polytechnic University, Ben Guerir, Morocco (02/2021-01/2023)
- Led the ICARDA Winter Wheat Program in Ankara, coordinating wheat improvement research, germplasm evaluation, and breeding efforts aimed at enhancing yield potential and adaptation to dryland environments. Ankara – Turkey (12/2014 to 12/ 2015).

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