Muhammad Uzair Qasim

PhD (Crop Genetics and Breeding)
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Publications

Zhao Q, Wu J, Lan L, Shahid M, **Qasim MU**, Yu K, Zhang C, Fan C, Zhou Y. Fine mapping and candidate gene analysis of a major QTL for oil content in the seed of *Brassica napus*. Theor Appl Genet. 2023 Nov 27;136(12):256. doi: 10.1007/s00122-023-04501-z. PMID: 38010528. (I.F: 4.439)

Qasim, M.U., Zhao, Q., Shahid, M., Cai, G., Huang, H., Li, G., et al. (2023). Overlapping pathways involved in resistance against Sclerotinia stem rot in *Brassica napus* revealed through transcriptomic and metabolomic profiling. Plant Growth Regulation. doi: 10.1007/s10725-023-00998-y.(I.F: 4.2)

Qasim, M.U., Zhao, Q., Shahid, M., Samad, R.A., Ahmar, S., Wu, J., Fan, C. and Zhou, Y. (2020) Identification of QTLs Containing Resistance Genes for Sclerotinia Stem Rot in *Brassica napus* Using Comparative Transcriptomic Studies. Front. Plant Sci. 11:776. (I.F: 5.6)

Ahmar, S.; Gill, R.A.; Jung, K.-H.; Faheem, A.; **Qasim, M.U.**; Mubeen, M.; Zhou, W. Conventional and Molecular Techniques from Simple Breeding to Speed Breeding in Crop Plants: Recent Advances and Future Outlook. Int. J. Mol. Sci. 2020, 21, 2590. (I.F: 5.6)

Shahid, M.; Cai, G.; Zu, F.; Zhao, Q.; **Qasim, M.U.**; Hong, Y.; Fan, C.; Zhou, Y. Comparative Transcriptome Analysis of Developing Seeds and Silique Wall Reveals Dynamic Transcription Networks for Effective Oil Production in *Brassica napus* L.. Int. J. Mol. Sci. 2019, 20, 1982. (I.F: 5.6)

Z. Elahi, N. N. Nawab, T. N. Khan, A. Ramzan, **M. U. Qasim**, T. Noor, M. S. Tariq and M. Farooq. Assessment of genetic variability and association between yield and yield components in indigenously developed chilli hybrids (*Capsicum annuum* L.). The J. Anim. Plant Sci. 29(5):2019. (I.F: 0.7)

Z. Elahi, N. N. Nawab, A.Ramzan, T.Noor, **M. U. Qasim**, T. N. Khan and N. Batool. Hybrid performance and analysis of genetic variability in green chillies (*Capsicum annuum* L.). Pak. J. Bot., 49(6): 2221-2225, 2017. (I.F: 1.2)

Muhammad Farooq, Aasia Ramzan, M. Riaz Chattha, **Uzair Qasim**, N.N. Nawab and Hidyatulllah. Studies on the Performance of Sweet Pepper (*Capsicum annum* L.) Hybrids under Plastic Tunnel. Science, Technology and Development 34 (3): 155-157, 2015.

Tariq Manzoor Khan and **M. Uzair Qasim**. Genetic studies of yield traits in cotton (*Gossypium hirsutum* L.). J. Agric. Res., 2012, 50(1).

Education

PhD in Crop Genetics and Breeding (2020)

- Dissertation/Thesis Title: Identification of resistant genes and pathways involved in resistance for Sclerotinia stem rot in *Brassica napus*
  (Identified genomic regions containing resistance genes using QTL studies and genes within QTL regions and pathways were identified using comparative transcriptomic and metabolomics studies)

  Institute: Huazhong Agricultural University, Wuhan - China

M.Sc. (Hons.) Plant Breeding and Genetics (2010)

- Thesis Title: Genetic studies of different quantitative characters of *Gossipium hirsutum* L.
  (Studied the mode of gene actions for different yield related traits using diallel cross between five drought tolerant commercial genotypes)

  Institute: University of Agriculture, Faisalabad-Pakistan

B.Sc. (Hons.) Agriculture (2008)

- Major: Plant Breeding and Genetics

  Institute: University of Agriculture, Faisalabad-Pakistan

Related Experience

Postdoctoral fellow (January, 2021- March, 2023**)**

Project: Quick screening of endogenous micro-RNA for drought and salt stress in soybean
(Learned experiences in CRISPR mediated gene transformation, knockout and overexpression studies, tissue culture, micro RNAs role in plant development and stress responses)

Institute: Nanchang University, Nanchang, Jiangxi, P.R. China.

Technical Officer/Research Assistant (July, 2012 – October, 2015)

Project: Indigenization of hybrid seed production technology for enhanced production of crops, vegetables section

(Learned experiences in hybrid seed production on chillies, bitter gourd, determinate and indeterminate tomatoes under tunnel, peas and brinjal crops, managed field activities, data recording and evaluation of indigenously developed hybrids)

Institute: National Agriculture Research Center, Islamabad, Pakistan

Skills learned

Genetic markers, quantitative trait loci (QTL), marker assisted selection, RNA sequencing, metabolomics, gene expression studies, field experiments including data collection, crossing and selfing techniques of plants, handling of molecular work for DNA and RNA, plant resistance trait analysis, presentation of work in scientific and comprehensive way. Experience in genetic transformation using CRISPR technology, developed knock out and over expression vectors.

References

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