

CURRICULUM VITAE

Name: **Muhammad Saif ur Rehman**
Highest Qualification: Ph.D
Current Position: Professor (BPS)
Postal Address: Institute of Animal and Dairy Sciences
University of Agriculture, Faisalabad (PAKISTAN)
Phone: 92 41 9200161 Ext 3202
e-mail: shsaifurrehman@yahoo.com, dr.saifurrehman@uaf.edu.pk
Cell: 92 333 6509241



Education

University

Year	Degree	Institution	CGPA/Marks	Subjects
2012	Post-Doc	Iowa State University of Science & Technology, USA	-	Animal Genomics
2009	Ph.D.	University of Agriculture, Faisalabad	-	Animal Breeding and Genetics
2002	*M. Sc.(Hons) A.B.G.	University of Agriculture Faisalabad	3.94/4.00	Animal Breeding and Genetics
2000	**B.Sc.(Hons) A.H.	University of Agriculture Faisalabad	3.93/4.00	Animal Husbandry

*First position Silver Medal

**Third position Bronze Medal

Employment

1. Professor (BPS)	12.10.2024 to date	Institute of Animal & Dairy Sciences, UAF
2. Associate Professor (Tenured)	28.10.2021 to 11.10.2024	Institute of Animal & Dairy Sciences, UAF
3. Assistant Professor (TTS)	02.12.2010 to 27.04.2021	Institute of Animal & Dairy Sciences, UAF
4. Assistant Professor	11.4.2009 to 1.12.2010	Department of Animal Breeding & Genetics, UAF
5. Lecturer	27.5.2004 to 10.4.2009	Department of Animal Breeding & Genetics, UAF
6. Lecturer (per lecture basis)	27.3.2002 to 26.5.2004	Department of Animal Breeding & Genetics, UAF

Honors

- First position Silver medal in M. Sc. (Hons.) ABG (University of Agriculture, Faisalabad) for the year 2002.
- Third position Bronze medal in B. Sc. (Hons.) Animal Husbandry (University of Agriculture, Faisalabad) for the year 2000.
- Throughout First Division in academic career.
- Recipient of "University Merit Scholarship" throughout University education.
- Recipient of "Postgraduate Merit Scholarship" for the year 2002. Faculty of Animal Husbandry, University of Agriculture, Faisalabad, Pakistan.
- Recipient of Star Award 2009 (Category: Agriculture) from South Asia Publications, Karachi, Pakistan.

- Completed Post-Doctoral fellowship from 24.10.2011 to 31.07.2012 funded by HEC, Pakistan for **Iowa State University, Ames, Iowa, USA.**

Research

Research area: General: Animal Breeding and Genomics
Specific: Molecular Genetics and Genomics
Current interests: Application of high-throughput genomics for whole genome selection and Cattle & Buffalo breed evaluation through genome-wide association.

Research Projects undertaken

- 2018-25. Establishment of National Center for Livestock Breeding, Genetics and Genomics, Sub-Center UAF. A PSDP HEC funded project for Rs. 43.143 million (Scientific Director/ Principal Investigator).
- 2019-23. Genomic assisted prediction of genetic values for economic traits in Sahiwal cattle of Pakistan. Sponsored by NRPU, HEC, Islamabad for Rs 6.93 million (Principal Investigator).
- 2016-19. Diversity for milk casein among different livestock species in Pakistan. Sponsored by NRPU, HEC, Islamabad for Rs 3.81 million (Principal Investigator).
- 2011-16. Development of egg-type chicken lines for backyard poultry production (Team member of PARB funded project).
- 2009-11. Development of a new breed of chicken for backyard poultry rearing phase-I (Team member of HEC funded project).
- 2007-09. Capacity Building in Molecular Genetic studies (Team member of HEC-BC JHELP funded project).
- 2002-09. Genetic diversity in indigenous cattle breeds of Pakistan using DNA markers. Ph.D. Thesis, University of Agriculture, Faisalabad.
- 2004-07. Genetic characterization of native cattle and buffalo breeds of Pakistan. (Co-PI of the ALP funded Project).
- 2000-02. Phylogenetic relationship among some native cattle breeds of Pakistan based on random amplified polymorphic DNA (RAPD) analysis. M. Sc. (Hons.) Thesis, University of Agriculture, Faisalabad.

PhD Student Research Projects

- a) As Supervisor (Completed) = 04
- b) As Supervisor (Ongoing) = 04
- c) As Member of Supervisory Committee (Completed) = 09
- d) As Member of Supervisory Committee (Ongoing) = 03

M.Sc.(Hons) / M.Phil Student Research Projects

- a) As Supervisor (Completed) = 45
- b) As Co-Supervisor (Completed) = 02
- c) As Member of Supervisory Committee (Completed) = 49

Books

- M. Q. Bilal, M. I. Mustafa and **M. S. Rehman**. 2017. "Bhair Bakrian Paalna" (in Urdu) Published by the office of Books and Magazine, University of Agriculture, Faisalabad.
- M. S. Rehman** and M. S. Khan. 2015. "Dahi Murghbani Guide". Published under GEF-ILRI project (in Urdu) ISBN 978-969-8237-78-3.
- M. S. Khan, **M.S. Rehman** and F. Hassan. 2014. "Poultry Guide". A farmer training booklet under PARB funded project (A Urdu Booklet).

Book Chapters

- M. I. Saleem, A. A. Butt, A. Mahfooz, **M. S. Rehman**, F. Ramzan, F. Zaka, S. K. Shah, Z. A. Bhutta, A. Raza and M. U. Khan. 2023. Chapter 45: Development of sustainable curative and preventive tools for the control of zoonotic diseases. In: A. Khan, R. Z. Abbas, M. F. Hassan, L. Aguilar-Marcelino, N. M. Saeed and M. Mohsin (Eds), Zoonosis, Unique Scientific Publishers, Faisalabad, Pakistan, Vol. I: 612-626. <https://doi.org/10.47278/book.zoon/2023.045> ISBN: 978-969-220110-0.
- Khan, M. S., S. A. Bhatti, S. H. Raza, **M. S. Rehman** and F. Hassan. 2018. Book Chapter: Livestock Production: Status and Policy Options. In: Developing sustainable Agriculture in Pakistan. Editors. I. A. Khan and M. S Khan. CRC Press, Taylor and Francis Group. ISBN: 978-0-8153-6653-9
- M. Yaqoob and **M. S. Rehman**. 2008. Role of computer technology in Dairying. P.112-115. In: Bakht Baidar Khan (ed.) Health and Husbandry of Dairy Animals. Pak TM Printers, Faisalabad (Pakistan). ISBN: 978-969-8237-37-0

Manuals

- **M. S. Rehman**, and M.S. Khan. 2012. Molecular Genetics of Farm Animals: A Practical Manual. ISBN 978-969-8237-48-6.

Publications in International Impact Factor Journals

1. Sesay, A. R., **M. S. Rehman**, F. Ramzan and F. S. Awan. 2024. Genome-Wide Assessment of Signatures of Selection in the Pakistan Sahiwal Cattle. Pakistan J. Zool. 56(4): 1607-1621. DOI: <https://dx.doi.org/10.17582/journal.pjz/20231211061004> (Impact Factor, 0.5)
2. Chishti, M. F. A., M. A. Rahman, **M. S. Rehman** and M. Q. Bilal. 2024. Chemical composition and In-situ digestion kinetics of nutritionally enriched straw from genetically improved wheat varieties. Pakistan J. Agric. Sci. 61: 671-684. DOI:10.21162/PAKJAS/24.153 (Impact Factor, 0.856)
3. Abdullah M, **M. S. Rehman**, M. S. N. Rehman, A. A. AlKahtane, T. M. Al-Hazani, F. Hassan and S. Rehman. 2023. Genome-Wide Identification, Evolutionary and Mutational Analysis of the Buffalo Sox Gene Family. Animals, 13(14):2246. <https://doi.org/10.3390/ani13142246> (Impact Factor, 3.231)
4. Hassan, F., T. Deng, **M. S. Rehman**, Z. Rehman, S. Sarfraz, M. Mushahid and S. Rehman. 2023. Genome-wide identification and evolutionary analysis of the FGF gene family in buffalo, Journal of Biomolecular Structure & Dynamics, DOI: [10.1080/07391102.2023.2256861](https://doi.org/10.1080/07391102.2023.2256861). (Impact Factor, 2.7)
5. Hassan, F., **M. S. Rehman**, M. Javed, K. Ahmad, I. Fatima, M. Safdar, N. Ashraf and A. Nadeem. 2023. Identification of phytochemicals as putative ligands for the targeted modulation of peroxisome proliferator-activated receptor α (PPAR α) in animals. Journal of Biomolecular Structure & Dynamics, DOI: [10.1080/07391102.2023.2268185](https://doi.org/10.1080/07391102.2023.2268185) (Impact Factor, 2.7)
6. Hassan, S., M. Sharif, M. A. Mirza and **M. S. Rehman**. 2023. Effect of Dietary Supplementation of Zinc Nanoparticles Prepared by Different Green Methods on Egg Production, Egg Quality, Bone Mineralization, and Antioxidant Capacity in Caged Layers. Biological Trace Element Research, 201:5794–5804, <https://doi.org/10.1007/s12011-023-03640-0> (Impact Factor, 3.4)
7. **Rehman, M. S.**, F. Hassan, Z. Rehman, H. N. Hussain, M. A. Shahid, M. Mushahid, B. Shokrollahi. 2022. Comparative Genomic Characterization of Relaxin Peptide Family in Cattle and Buffalo, BioMed Research International, Article ID 1581714, <https://doi.org/10.1155/2022/1581714>. (Impact Factor, 3.246)
8. Asim, M., **M. S. Rehman**, F. Hassan and F. S. Awan. 2022. Genetic variants of *CSN1S1*, *CSN2*, *CSN3*, and *BLG* genes and their association with dairy production traits in Sahiwal cattle and

- Nili-Ravi buffaloes, *Animal Biotechnology*, DOI: [10.1080/10495398.2022.2126365](https://doi.org/10.1080/10495398.2022.2126365). (Impact Factor, 1.7)
9. **Rehman, M. S.**, F. Hassan, Z. Rehman, I. Ishtiaq, S. Rehman, and Q. Liu. 2022. Molecular Characterization of TGF-Beta Gene Family in Buffalo to Identify Gene Duplication and Functional Mutations. *Genes*, 13:1302. <https://doi.org/10.3390/genes13081302> (Impact Factor, 4.141)
 10. **Rehman M.S**, F. Hassan, J. Reecy, and T. Deng. 2022. Whole-genome SNP markers reveal runs of homozygosity in indigenous cattle breeds of Pakistan. *Animal Biotechnology*; 2026369. <https://doi.org/10.1080/10495398.2022.2026369>. (Impact Factor, 1.7).
 11. **Rehman, M. S.**, F. Hassan and M. S. Khan. 2022. Phylogenetic Relationship Among Indigenous Cattle Breeds Of Pakistan Based on RAPD Markers. *Pakistan J. Zoology*. MH20210615070608. <https://dx.doi.org/10.17582/journal.pjz/20210615070608> (Impact Factor, 0.5).
 12. Shoaib, M., S. A. Bhatti, H. Nawaz and **M. S. Rehman**. 2021. Effect of different fat sources and energy levels on growth performance, nutrient digestibility and meat quality in broiler chicks. *J. Anim. Plant Sci.* 31(5): 1252-1262. <https://doi.org/10.36899/JAPS.2021.5.0325> (Impact Factor, 0.7)
 13. Shoaib, M., S. A. Bhatti, H. Nawaz and **M. S. Rehman**. 2021. Effect of lipase and bile acids on growth performance, nutrient digestibility and meat quality in broilers on energy diluted diets. *Turk. J. Vet. Anim. Sci.* 45: 148-157. DOI: 10.3906/vet-2008-52 (Impact Factor, 0.5)
 14. Shoaib, M., S. A. Bhatti, H. Nawaz and **M. S. Rehman**. 2021. Effect of different emulsifier on growth performance, intestinal histology, and serum biochemistry in broilers reared on different fat sources. *Pakistan Vet. J.* 41(2): 185-190. DOI: 10.29261/pakvetj/2021.012 (Impact Factor, 3.8)
 15. Arshad, M. A., F. Hassan, S. A. Bhatti, **M. S. Rehman**, W. Yousaf, G. Younus, O. Sizmaz, and M. Q. Bilal. 2021. Supplementation of bile acids and lipase in broiler diets for better nutrient utilization and performance: Potential effects and future implications—A review. *Annals of Animal Science*, 21(3), 757-787. DOI: <https://doi.org/10.2478/aoas-2020-0099> (Impact Factor, 1.8)
 16. **Rehman, M. S.**, S. Rehman W. Yousaf, F. Hassan, W. Ahmad Q. Liu and H. Pan 2021. The Potential of Toll-Like Receptors to Modulate Avian Immune System: Exploring the Effects of Genetic Variants and Phytonutrients. *Front. Genet.* 12:671235. <https://doi.org/10.3389/fgene.2021.671235> (Impact Factor, 2.8).
 17. Hassan, F., A. Nadeem, Z. Li, M. Javed, Q. Liu, J. Azhar, **M. S. Rehman**, K. Cui, S. Rehman. 2021. Role of Peroxisome Proliferator-Activated Receptors (PPARs) in Energy Homeostasis of Dairy Animals: Exploiting Their Modulation through Nutrigenomic Interventions. *Int. J. Mol. Sci.* 22, 12463. <https://doi.org/10.3390/ijms222212463> (Impact Factor, 4.9).
 18. Hassan, F. M. A. Arshad, S. Hassan, R. M. Bilal, M. Saeed and **M. S. Rehman**. 2021. Physiological role of Arginine in growth performance, gut health and immune response in broilers: a review, *World's Poultry Science Journal*, <https://doi.org/10.1080/00439339.2021.1925198>. (Impact Factor, 3.9).
 19. Arshad, M. A., F. Hassan, **M. S. Rehman**, S. A. Huws, Y. Cheng and A. U. Din. 2021. Gut microbiome colonization and development in neonatal ruminants: Strategies, prospects, and opportunities, *Animal Nutrition*, 7(3): 883-895. <https://doi.org/10.1016/j.aninu.2021.03.004>. (Impact Factor, 6.1).
 20. Hassan, F. M. A. Arshad, M. Li, **M. S. Rehman**, J. J. Looor and J. Huang. 2020. Potential of Mulberry leaf biomass and its flavonoids to improve production and health in ruminants: mechanistic insights and prospects. *Animals* 10 (11):2076. doi: [10.3390/ani10112076](https://doi.org/10.3390/ani10112076) (Impact Factor 2.7).
 21. Hassan, F., M. A. Arshad, H. M. Ebeid, **M. S. Rehman**, M. S. Khan, S. Shahid, and C. Yang. 2020. Phytogenic additives can modulate rumen microbiome to mediate fermentation kinetics and

- methanogenesis through exploiting diet–microbe interaction. *Frontiers in Veterinary Science*, 7, 575801. . <http://dx.doi.org/10.3389/fvets.2020.575801> (Impact Factor, 2.6)
22. Hassan, F., M. S. Khan, **M. S. Rehman**, S. M. R. Dilshad and M. A. Ali. 2019. Genetic diversity among some horse breeds present in Pakistan. *Pakistan J. Zool.* 51(4), 1203-1209. <http://dx.doi.org/10.17582/journal.pjz/2019.51.4.1203.1209> (Impact Factor, 0.5)
 23. Hassan, F., **M. S. Rehman**, M. S. Khan, M. A. Ali, A. Javed, A. Nawaz and C. Yang. 2019. Curcumin as an Alternative Epigenetic Modulator: Mechanism of Action and Potential Effects. *Front. Genet.* 10:514. doi:10.3389/fgene.2019.00514 (Impact Factor, 2.8)
 24. Hassan, S., F. Hassan, and **M. S. Rehman**. 2019. Nano-particles of trace minerals in poultry nutrition: Potential applications and future prospects. *Biological Trace Element Research*, 8(1-22) DOI: [10.1007/s12011-019-01862-9](https://doi.org/10.1007/s12011-019-01862-9) (Impact Factor, 3.4)
 25. Batool, F., H.A. Khan, and **M. S. Rehman**. 2019. Feeding ecology of blue rock pigeon (*Coluba livia*) in the three districts of Punjab, Pakistan. *Braz. J. Biol.* <http://doi.org/10.1519-6984.225451> (Impact Factor, 1.651)
 26. Hassan, F., A. Nawaz, **M. S. Rehman**, M. A. Ali, S. M. R. Dilshad and C. Yang. 2019. Prospects of HSP70 as a genetic marker for thermo-tolerance and immuno-modulation in animals under climate change scenario. *Animal Nutrition* 5:340-350. <http://doi.org/10.1016/j.aninu.2019.06.005> (Impact Factor, 6.1)
 27. Batool, F. H. A. Khan and **M. S. Rehman**. 2019. Genetic diversity analysis in House Sparrow (*Passer Domesticus*) using Microsatellite markers in Punjab, Pakistan. *J. Anim. Plant Sci.* 29(1):343-348. <https://thejaps.org.pk/docs/V-29-01/40.pdf> (Impact Factor, 0.7)
 28. Samin D., **M. S. Rehman**, M. S. N. Rehman, M. S. Khan. 2018. Association of BRCA1 185 del AG with early age onset of breast cancer patients in selected cohort from Pakistani population. *Pak J Med Sci.* 34(5):1158-1163. doi: <https://doi.org/10.12669/pjms.345.15764> (Impact Factor, 1.2)
 29. Ullah, A., M. Sharif, M. A. Mirza, **M. S. Rehman** and A. U. Hyder. 2017. Effect of different levels of yeast culture on digestibility, nitrogen balance and ruminal characteristics in buffalo bulls. *Buffalo Bulletin* 36(4):653-660 (Impact Factor, 0.2)
 30. Nawaz, H., N. Shahzad, **M. S. Rehman** and M. Ali. 2016. Effect of feeding xylanase and cellulase treated oat silage on nutrient digestibility, growth performance and blood metabolites of Nili Ravi buffalo calves. *Pak. J. Agri. Sci.* 53(4):999-1004. <http://www.pakjas.com.pk/papers/2664.pdf> (Impact Factor, 0.856)
 31. Nawaz, H., U. Ashfaq, M. Ali and **M. S. Rehman**. 2016. In Situ Rumen degradation kinetics of four sorghum varieties in Nili Ravi buffaloes. *J Anim. Plant Sci.* 26(2):355-359. <http://www.thejaps.org.pk/docs/v-26-02/08.pdf> (Impact Factor, 0.7)
 32. Sadeef, S., M. S. Khan and **M. S. Rehman**. 2015. Indigenous chicken production in Punjab: a detailed survey through participatory rural appraisals. *J Anim. Plant Sci.* 25(5): 1273-1282. <http://www.thejaps.org.pk/docs/v-25-05/11.pdf> (Impact Factor, 0.7)
 33. Rehman, Z., M. S. Khan, **M. S. Rehman** and F. Hassan. 2013. Genetic control and association among economic traits in Sahiwal cattle: a review. *J. Anim. Plant Sci.* 23(3):678-691. www.thejaps.org.pk/docs/v-23-2/01.pdf (Impact Factor, 0.7)
 34. Decker, J. E., S. D. McKay, M. M. Rolf, J. Kim, A. M. Alcala', T. S. Sonstegard, O. Hanotte, A. Gotherstrom, C. M. Seabury, L. Praharani, M. E. Babar, L. C. A. Regitano, M. A. Yildiz, M. P. Heaton, W. Liu, C. Lei, J. M. Reecy, **M. S. Rehman**, R. D. Schnabe, J. F. Taylor. 2013. Worldwide Patterns of Ancestry, Divergence, and Admixture in Domesticated Cattle. *PLOS Genet.* 10(3): e1004254. <http://journals.plos.org/plosgenetics/article?id=10.1371/journal.pgen.1004254> (Impact Factor, 4.5)

35. Khan, M. S., Z. Rehman, S. Ahmad, F. Hassan and **M. S. Rehman**. 2012. Prediction of standard lactation milk yield from completed lactations of longer duration in cattle and buffaloes. *Pakistan Vet. J.* 32(1): 122-124. www.pvj.com.pk/pdf-files/25_4/175-178.pdf (Impact Factor, 3.8)
36. Khan, M. S., **M. S. Rehman** and F. Hassan. 2012. Breeding buffaloes in genomics era - issues of recording and evaluation. *J. Anim. Plant Sci.* 22(3): 174-180. www.thejaps.org.pk/docs/Supplementary/03/010.pdf (Impact Factor, 0.7)
37. Parveen, A., M. S. Khan, **M. S. Rehman** and A. Hussain. 2009. Semen production and productive life of Nili-Ravi bulls: relationship with genetic worth. *Pakistan J. Zool.* 9: 593-597 (Impact Factor, 0.5)
38. Khan, M. S., F. Hassan, **M. S. Rehman**, S. Ahmad and Z. Rehman. 2009. Days open and seasonality of calving in buffaloes and cattle in Pakistan. *Pakistan J. Zool.* 9:195-199 (Impact Factor, 0.5)
39. Rehman, A., M. Younas, M. Yaqoob and **M.S. Rehman**. 2009. Evaluation of different computerized identification systems in water Buffaloes. *Pakistan J. Zool.* 9:575-586 (Impact Factor, 0.5)
40. **Rehman, M. S.** and M. S. Khan. 2009. Genetic Diversity of Haryana and Hissar cattle from Pakistan using microsatellite analysis. *Pakistan Vet. J.*, 29(2):67-71 (Impact Factor, 3.8)
41. Khan, M. A., M. Sarwar, M. S. Khan, **M. S. Rehman**, M. Nisa, W. S. Lee and H. S. Kim. 2008. Use of additives to capture nitrogen in ammoniated wheat straw: Intake, ruminal parameters, digestibility and nitrogen utilization in buffaloes. *Livest. Sci.* 114:347-353 (Impact Factor, 1.8)
42. Hyder, A. U., M. S. Khan, M. Aslam, **M. S. Rehman** and I. R. Bajwa. 2007. Milk yield and season of calving in buffaloes and cattle in Pakistan. *Italian J. Anim. Sci.* 6:1347-1350 (Impact Factor, 2.2)
43. Hassan, F., M. S. Khan, **M. S. Rehman**, M. Sarwar and S. A. Bhatti. 2007. Seasonality of calving in Nili-Ravi buffaloes, purebred Sahiwal and crossbred cattle in Pakistan. *Italian J. Anim. Sci.* 6:1298-1301 (Impact Factor, 2.2)
44. Khan, M. S., F. Hassan, **M. S. Rehman**, A. U. Hyder and I. R. Bajwa. 2007. Genetic control of milk yield from lactations of different duration in Nili-Ravi buffaloes. *Archives of Animal Breeding* 50(3):227-239 (Impact Factor, 1.6)
45. Khan, M. S., A. U. Hyder, I. R. Bajwa, **M. S. Rehman** and F. Hassan. 2005. Prediction of lactation yield from last-record day and average daily yield in Nili-Ravi buffaloes. *Pakistan Vet. J.* 25(4):175-178 (Impact Factor, 3.8)

Other Research Papers

- Asim, M., M. S. Rehman and F. Hassan. 2022. Comparative genomic characterization and screening of regulatory regions of casein gene family in *Bos taurus* and *Bubalus bubalis*. *Journal of Global Innovations in Agricultural Sciences*, <https://doi.org/10.22194/JGIAS/10.995> (ISSN 2788-4538, 2788-4546, Category Y)
- Sahar, N. U., M. Shoaib, M. A. Mirza, S. Ashraf, S. A. Bhatti, **M. S. Rehman** and M. Farooq. 2022. Replacement of vegetable protein sources with marine by-product on nutrient utilization, protein digestibility, meat quality, and economics in Ross-308 broilers. *Int. J. Agri. Biol.* 22-0152/2022/28-2-93-99, DOI: 10.17957/IJAB/15.1956 (ISSN 1814-9596, Category Y)
- Javed, M. Z., M. Sharif, S. A. Bhatti, M. Q. Bilal, F. Ahmed, F. Ahmad, **M. S. Rehman** and M. Tariq. 2016. Nutrient intake, nitrogen balance and growth performance in buffalo calves fed citrus pulp as a concentrate source. *African J. Agric. Res.* 11 (29): 2562-2568. <http://www.academicjournals.org/journal/AJAR/article-full-text-pdf/C54DF2C59556>
- Sharif, M., M. Shoaib, **M. S. Rehman**, F. Ahmad and A. Javed. 2016. Use of Distillery Yeast Sludge in Poultry: A Review. *Scholarly J. Agric. Sci.* 6(8):242-256. <http://scholarlyjournals.com/sjas/archive/2016/December/pdf/Sharif%20et%20al.pdf>

- Sadef, S., M.S. Khan, **M.S. Rehman**, M.N.M. Ibrahim and A.M. Okeyo. 2015. Flock Composition and Pattern of Entry and Exit of Village Chickens in Punjab (Pakistan). Tropical Agricultural Research. Vol. 26 (3): 448-455.
- Waheed, H. M., S. Ali, M. S. Khan, **M. S. Rehman** and G. Abbas. 2015. Molecular Genetic Variations among some Punjab sheep breeds using RAPD analysis. Adv. Zool. Bot. 3(1):1-5. <http://www.hrpub.org/download/20150101/AZB1-11403102.pdf>
- **Rehman, M. S.** and I. R. Bajwa. 2004. Molecular Genetic Diversity in Cattle. Agri. Sci. J. Pak. 1(2):101-107.

Membership of Societies/Journals

- Secretary Animal Breeders' Club of Pakistan.
- Information secretary (Punjab Zone) of Animal Husbandry Association, Pakistan.
- Member of Animal Husbandry Association, Pakistan.
- Member of Pakistan Association for the Advancement of Science.

Trainings

- Attended Hands on workshop on "Layer Flock Control System" at University of Agriculture, Faisalabad (November 23, 2015).
- Attended a two days workshop on "Applications of Bioinformatics in Genomics" at University of Agriculture, Faisalabad (September 16-17, 2015).
- Attended a five days training on "Active Citizens Training of Facilitators" at University of Agriculture, Faisalabad (September 07-11, 2015).
- Attended a two days workshop on "Research Planning and Synopsis Writing" at University of Agriculture, Faisalabad (June 10-11, 2015).
- Attended a one day workshop on "Up-gradation of Modules in Molecular Genetics and Genomics" at University of Veterinary and Animal Sciences, Lahore organized by British Council INSPIRE Transnational Education Partnership Program and Department of Livestock Production, UVAS (March 19, 2015).
- Attended one day International workshop on "Buffalo Data Recording" at University of Veterinary and Animal Sciences, Lahore (April 21-23, 2014). Moderator of Technical Session 1.
- Attended four day international training of trainers workshop on "Livestock Value Chains- Concepts and Analyses" at Islamabad (March 17-20, 2014).
- Attended one day crash course on "Project Management in Higher Education Institutions" at University of Agriculture, Faisalabad (March 10, 2014).
- Attended a master class in "Enquiry-Based Learning" at University of Agriculture, Faisalabad (March 01, 2014).
- Attended three day workshop on "Project Formulation Workshop" at University of Agriculture, Faisalabad (December 3-4, 2013).
- Attended one day workshop on "Consultative workshop on Devotement of commercial farm data recording sheets" at University of Agriculture, Faisalabad (October 11, 2013).
- Attended one day workshop on "Self-Assessment and quality improvement in research reports" at University of Agriculture, Faisalabad (May 22, 2013).
- Attended one day seminar on "Amipro, Rumen Bypass Protein and what it can do for milk producers" at University of Agriculture, Faisalabad (March 26, 2013).
- Attended three day workshop on "Data analysis and developing research grant proposal" at Faculty of Animal Husbandry, University of Agriculture, Faisalabad (27-29.12.2012).
- Attended GEF-ILRI three day workshop on "P-DAGRIS" held at Department of ABG, University of Agriculture, Faisalabad (15-17.11.2012).

- Animal Breeding and Genetics short course on “Statistical Methods for Genome-Enabled Selection” May 6-10, 2012, Department of Animal Science, Iowa State University Ames, Iowa, **USA**.
- SAS Workshop “Introduction to Enterprise Guide” February 21-23, 2012, Department of Statistics, Iowa State University, Ames, Iowa, **USA**.
- Attended three day Workshop on “Statistical Analysis using SPSS and MINITAB” at Department of Mathematics and Statistics, University of Agriculture, Faisalabad (5-7 October, 2011).
- Attended one day International Seminar on “Role of Livestock in Pakistan’s Economy” at Faculty of Animal Husbandry, University of Agriculture, Faisalabad (02.05.2011).
- Attended one day Symposium on “Livestock Production- National and Global Perspective” at Faculty of Animal Husbandry, University of Agriculture, Faisalabad (17.03.2011).
- Attended Seminar on “Poultry Growth Modelling using Neural Networks” by Dr. Hafiz Anwar Ahmad, at IAN&FT, University of Agriculture, Faisalabad (14.03.2011).
- Five day workshop on “Socio-Economic Survey Tools” under GEF-UNEP-ILRI FAnGR Asia Project entitled “ Development and application of decision support tools to conserve and sustainably use genetic diversity in indigenous livestock and wild relatives” at University of Agriculture, Faisalabad (February 14-18, 2011).
- Attended GEF-ILRI one day seminar on “Development and Application of Decision Support Tool to conserve and sustainably use genetic diversity in indigenous livestock and their wild relatives held at Department of ABG, University of Agriculture, Faisalabad (24.01.2011).
- National Academy of Higher Education’s training entitled “Professional Competency Enhancement Program for Teachers” at University of Agriculture, Faisalabad (July 15 to August 11, 2009).
- Four day workshop entitled “WTO agreements and their impact on Pakistan’s economy” at University of Agriculture, Faisalabad (June 3-6, 2009).
- Four day Workshop entitled “Polymerase Chain Reaction (PCR) and Cloning Methodologies: Theory and Practice” at University of Newcastle Upon Tyne, UK (September 18-21, 2007).
- One day workshop entitled “ebooks workshop” at NIBGE, Faisalabad organized by HEC, Islamabad (October 22, 2007).
- One day workshop entitled “The methods of impact assessment in field studies” at University of Agriculture, Faisalabad (March 20, 2004).
- German as Foreign Language-I. Division of Continuing Education, University of Agriculture, Faisalabad (Dec. 3, 2003 to Feb. 3, 2004).
- EU Asia Link Project short course on “Livestock Ecology, Sustainable Land Use and Livestock Systems” University of Agriculture, Faisalabad (Pakistan) (Jan. 12 to 24, 2004).
- EU Asia Link Project short course on “Principles of Experimental Design and Analysis”. Saline Agriculture Research Centre, University of Agriculture, Faisalabad (Pakistan) (Dec. 1 to 12, 2003).

Papers in Proceedings/Conferences/Workshops Abstracts

- Hassan, S., M. Asnan, M. M. A. Hamid, **M. S. Rehman**, M. K. Bashir, F. Ahmad, M. Asim, and M. Sharif. 2024. Synthesis and characterization of ZnO nanoparticles using different plant extracts (garlic, Aloe vera, turmeric and ginger). In Abstract Book: International Symposium on Nanobiology: Integrating, Nanotechnology & Microbiology for a Sustainable Future. Government College University Faisalabad (February 28-29, 2024).
- Sahar, N. U., M. A. Mirza, S. A. Bhatti, **M. S. Rehman**. 2019. Effect of lysine supplementation in hi-pro fish meal basal diet on growth performance in male and female broiler birds. Proc: “3rd WPSA International Layer Quality Conference” held on 23-24 October, 2019 at University of Agriculture, Faisalabad, Pakistan.

- Ashraf, S., S. A. Bhatti, F. Hassan, **M. S. Rehman**, N. U. Sahar, M. Shoaib and M. Yousaf. 2019. Enrichment of poultry eggs with Omega-3 fatty acids as functional food through dietary manipulation. Proc: “3rd WPSA International Layer Quality Conference” held on 23-24 October, 2019 at University of Agriculture, Faisalabad, Pakistan.
- Yousaf, W., M. S. Khan, **M. S. Rehman**, S. Imran, M. Asim, and S. Shahid. 2019. Genetic resistance in layer via Toll-Like receptors to improve the productivity. Proc: “3rd WPSA International Layer Quality Conference” held on 23-24 October, 2019 at University of Agriculture, Faisalabad, Pakistan.
- M.S. Khan, **M.S. Rehman**, F. Hassan, S. Ahmad and M.M. Din. 2019. Buffalo breeding in Pakistan-status and prospects. Proc: International Buffalo Congress (February 18-20, 2019) at Lahore, Pakistan.
- Sahar, N. U., M. A. Mirza, S. A. Bhatti, **M. S. Rehman**. 2018. Substitution of vegetable protein ingredients with Hi pro fish meal and its impact on the growth performance, nutrient digestibility and carcass response in ROSS-308 broilers from day 1-21. “National Symposium on Health and Welfare” held on 11-12 December, 2018 at Pir Mehr Ali Shah Arid Agriculture University Rawalpindi, Pakistan.
- Sahar, N. U., M. A. Mirza, S. A. Bhatti, **M. S. Rehman**. 2018. Substitution of vegetable protein ingredients with Hi pro fish meal and its effect on whole body composition and protein quality in ROSS-308 broilers from day 1-21. “Innovations in Agriculture: Nourishing Pakistan in Changing climate” at University of Agriculture, Faisalabad, Pakistan.
- S. Sadeef and M. S. Khan and **M. S. Rehman**. 2016. Indigenous chicken production – documenting the production system. Proceedings of Dissemination Colloquium on Studies on Indigenous Chicken and Goat Production in Pakistan-Outcomes and Way Forward. Univ. Agri. Faisalabad (May 28, 2016) ISBN 9789698237851.
- **M. S. Rehman**, A. Iqbal, I. Safdar and M. Sajjad Khan. 2016. Documenting diversity in egg white, eggshell pigmentation and ultra-structures in indigenous chicken populations. Proceedings of Dissemination Colloquium on Studies on Indigenous Chicken and Goat Production in Pakistan-Outcomes and Way Forward. Univ. Agri. Faisalabad (May 28, 2016) ISBN 9789698237851.
- M. Ashraf, **M. S. Rehman** and M. S. Khan. 2016. Comparative growth performance of three indigenous chicken genotypes and their crosses. Proceedings of Dissemination Colloquium on Studies on Indigenous Chicken and Goat Production in Pakistan-Outcomes and Way Forward. Univ. Agri. Faisalabad (May 28, 2016) ISBN 9789698237851.
- R. S. Bilal, M. S. Khan and **M. S. Rehman**. 2016. Genetic variation in egg quality traits among different breeds of chicken. Proceedings of Dissemination Colloquium on Studies on Indigenous Chicken and Goat Production in Pakistan-Outcomes and Way Forward. Univ. Agri. Faisalabad (May 28, 2016) ISBN 9789698237851.
- K. Abbas, M. Q. Bilal, M. Yaqoob and **M. S. Rehman**. 2015. Effect of bovine somatotropin hormone on the production performance of Nili Ravi buffaloes kept in peri-urban and rural areas of Faisalabad. Proc. 3rd International Workshop on Dairy Science Park. Faculty of Animal Husbandry. The University of Agriculture, Peshawar (November 16-18, 2015).
- S. Sadeef, M.S. Khan, **M.S. Rehman**, M.N.M. Ibrahim and A.M. Okeyo. 2014. Chicken inventory and pattern of entry and exit of indigenous birds at village level in Punjab (Pakistan). Proc. 26th Annual Congress of the Postgraduate Institute of Agriculture, Plant Genetic Resource Centre, Gannoruwa, Peradeniya, Srilanka (November, 20-21, 2014).
- M. A. Shahzad., F. Javed, M. Nisa, M. Sarwar and **M. S. Rehman**. 2013. Nutrient profile of Berseem (*Trifolium alexandrinum*) as affected by Softex application and its in situ digestion

- kinetics in Nili Ravi buffalo bulls. Proc. 11th world Congress on Animal Production. Beijing, China (October 11-15, 2013) Abstract # WCAP2013-2-03-017 P-134.
- **M. S. Rehman**, G. Ali, M. S. Khan and S. Ahmad. 2013. Genetic variation among rural chicken populations in Pakistan. Proc. 11th world Congress on Animal Production. Beijing, China (October 11-15, 2013) Abstract # WCAP2013-1-05-022 P-176.
 - N. Saeed, N. A. Tauqir, M. A. Shahzad, M. Sarwar, M. Nisa and **M. S. Rehman**. 2013. Nutritive value and in situ digestion kinetics of some leguminous and non-leguminous fodder baled silages in buffalo bulls. [Proceedings of 10th World Buffalo Congress and 7th Asian Buffalo Congress Held from May 6-8th 2013, Hilton Phuket Arcadia Resort and Spa. Thailand [Abstract ID:NUF050].
 - M. A. Shahzad, M. Afzaal, M. Sharif, M. Nisa, **M. S. Rehman**, M. Sarwar, N. A. Tauqir, M. Riaz. 2013. Graded replacement of corn grain by wheat grain in Sahiwal calves: Influence on nutrients intake, digestibility, blood metabolites and growth performance. Proceedings of 10th World Buffalo Congress and 7th Asian Buffalo Congress Held from May 6-8th 2013, Hilton Phuket Arcadia Resort and Spa. Thailand [Abstract ID:NUF0039]
 - J. Decker , H. Noyes, J. W. Kim, M. Babar, J. M. Reecy, **M. S. Rehman**, A. Götherström, L. Praharani, T. Sonstegard, O. Hanotte, A. Molina, C. M. Seabury, M. A. Yildiz , M. P. Heaton, W. Liu , R. Schnabel and J. Taylor. 2013. World-wide Patterns of Divergence, Migration and Admixture in Domesticated Cattle. Plant and Animal Genome XXI. January 12-16, 2013, San Diego, CA, USA.
 - G. Ali, **M. S. Rehman**, M. S. Khan and S. Ahmad. 2011. Microsatellite polymorphism among rural chicken populations of Pakistan. EAAP Annual Meeting 2011, Stavanger, Norway.
 - **M. S. Rehman**. 2011. Genetic variation among rural chicken populations of Pakistan. RBI 8th Global Conference on the Conservation of Animal Genetic Resources (4-8 October, 2011). Tekirdag, Turkey.
 - A. Rehman, M. Younas, M. Yaqoob and **M.S. Rehman**. 2009. Evaluation of different computerized Identification systems in water buffaloes. 6th Asian Buffalo Congress, Lahore, Pakistan (Oct 27-30, 2009) Page: 196.
 - S. Ali, **M.S. Rehman**, P. Akhtar, M. Rehman, J.I. Sultan and H.L. Shaheen. 2009. Genetic divergence and relationship among five buffalo breeds of Pakistan using a random amplified polymorphicDNA (RAPD) analysis. 6th Asian Buffalo Congress, Lahore, Pakistan (Oct 27-30, 2009) Page: 197.
 - M. S. Khan, **M.S. Rehman**, I.R. Bajwa, F. Hassan and A. U. Hyder. 2008. Days open and seasonality of calving in buffaloes and cattle in Pakistan. WCAP 2008 South Africa (November 26, 2008).
 - M. S. Khan and **M. S. Rehman**. 2007. Application of indigenous knowledge in animal breeding. National conference on Prospects of Ethro-Veterinary (Traditional) Medicine Research and Development in Pakistan. Dept. Veterinary Parasitology, University of Agriculture Faisalabad (Feb. 16-17, 2007).
 - F. Hassan, S. Ali, M. S. Khan, **M. S. Rehman** and Y. Zafar. 2006. Phylogenetic relationship among different horse breeds in Pakistan based on random amplified polymorphic DNA (RAPD) analysis. 57th EAAP annual meeting, Antalya, Turkey (Sep. 17 to Sept. 20, 2006).
 - **M. S. Rehman**, Z. Ahmad, M. S. Khan and Y. Zafar. 2003. Phylogenetic relationships among indigenous cattle breeds of Pakistan based on random amplified polymorphic DNA (RAPD) analysis. 54th EAAP annual meeting, Rome, Italy (Aug. 29 to Sept. 3, 2003).
 - Younas, M., **M. S. Rehman** and S. Rehman. 2001. Prospects of Livestock Improvement in Desert Ecosystem. Published in the Proc. of “International Workshop on Conservation and Management

of Cholistan Desert Resources – Challenges and Strategies” held on March 27-28, 2000 at CIDS, Islamia University, Bahawalpur.

Popular Articles

- M. Q. Bilal, **M. S. Rehman**, and F. Ramzan. 2024. “Qurbani kay Janwar, khareed, nighedasht aur zeebah karna”. Zarai Digest. 59(1): 45-47. (in Urdu)
- M. Q. Bilal, **M. S. Rehman**, M. Riaz and M. A. Rahman. 2023. “Bhainsoun kay dhoodh aur khubsurti ka muqabla”. Zarai Digest. 58(2): 10-11. (in Urdu)
- M. Q. Bilal, **M. S. Rehman**, and M. A. Rahman. 2023. “Bhainse bahtreen black gold”: Pakistan ka dhoddhel janwar. Zarai Digest. 58(2): 39. (in Urdu)
- M. Q. Bilal, M. A. Rahman, **M. S. Rehman** and S. Ahmad. 2023. “Janwaroun ki paidawar par shaded gharmai key israat aur bachao key tareeqey”. Zarai Digest. 58(1): 40-41. (in Urdu)
- M. Q. Bilal, M. A. Rahman, **M. S. Rehman** and S. Ahmad. 2022. “Dhodeel janwaroun sey zyaida pedawar hasil karney key ghazai asul”. Zarai Digest. 57(4): 62-63. (in Urdu)
- I. A. Khan, M. Q. Bilal and **M. S. Rehman**. 2022. “Bhair aur bakrioun ka muqabla khubsurti”. Zarai Digest. 57(2): 13-14. (in Urdu)
- M. Q. Bilal, and **M. S. Rehman**. 2022. “Katroun aur Bachroun ki behtar nighedast”. Zarai Digest. 57(1): 55-56. (in Urdu)
- **M. S. Rehman**, M. Qamar Bilal and I. Mustafa. 2018. Improved animal production through rational livestock breeding policy in Pakistan. Zarai Digest. 53(3):64-65.
- M. Qamar Bilal, I. Mustafa and **M. S. Rehman**. 2018. Practical approach for enhanced milk production in Pakistan. Zarai Digest. 53(2):54-56.
- **M. S. Rehman**, M. Qamar Bilal and I. Mustafa. 2018. “Bhair Bakrioun ka Intekhab aur Khareed”. Zarai Digest. 53(1): 34. (in Urdu)
- **M. S. Rehman**. 2016. “Dhodhail Janwaroun ki paidawari salahiat bathaney key rahnuma asool”. Zarai Digest. 4(1): 31-32. (in Urdu)
- N. Nazish, K. Abbas, S. Abdullah, M. S. I. Zamer and **M. S. Rehman**. 2015. Causes of Genetic Degradation in Fisheries. Technology Times. Vol. (6)7.
(<http://technologytimes.pk/post.php?title=Causes+of+genetic+degradation+in+fishries>) (a newspaper article)
- **M. S. Rehman**. 2013. A radio talk for FM 100.4 in Urdu titled “Biotechnology braey ifzaishey hawanat” (10.12.2013).
- **M. S. Rehman**. 2013. A radio talk for FM 100.4 in Urdu titled “Murghioun mein hyatiati tanuwao” (10.12.2013).
- **M. S. Rehman**. 2013. A radio talk for FM 100.4 in Urdu titled “Pakistani Ghaion mein hyatiati tanuwao” (09.12.2013).
- **M.S. Rehman** and M.S. Khan. 2009. “Pakistani Ghaeoun key darmaan jeniati tanou”. Zari Digest, Festival No. 2009 (1-2):95-96. (in Urdu)

Papers Presented at Conferences/Workshops

- **M. S. Rehman**, A. Iqbal, I. Safdar and M. Sajjad Khan. 2016. Documenting diversity in egg white, eggshell pigmentation and ultra-structures in indigenous chicken populations. Proceedings of Dissemination Colloquium on Studies on Indigenous Chicken and Goat Production in Pakistan-Outcomes and Way Forward. Univ. Agri. Faisalabad (May 28, 2016) ISBN 9789698237851.
- M. Sarwar and **M. S. Rehman**. 2015. Business scope in livestock industry for Northern Pakistan. Presented at 3rd International Workshop on Dairy Science Park. Faculty of Animal Husbandry. The University of Agriculture, Peshawar (November 16-18, 2015).

- S. Sadeef, M.S. Khan, **M.S. Rehman**, M.N.M. Ibrahim and A.M. Okeyo. 2014. Chicken inventory and pattern of entry and exit of indigenous birds at village level in Punjab (Pakistan). Presented at 26th Annual Congress of the Postgraduate Institute of Agriculture, Plant Genetic Resource Centre, Gannoruwa, Peradeniya, Srilanka (November, 20-21, 2014).
- M.S. Khan, F. Hassan and **M. S. Rehman**. 2013. Buffalo Genetic Improvement Strategies – present scenario. International symposium on “Buffalo Research and Development” University of Veterinary and Animal Sciences, Lahore (09.04.2013).
- M. S. Khan, F. Hassan and **M. S. Rehman**. 2013. Developing chicken lines for backyard poultry in Pakistan. International seminar on “Interventions to promote Indigenous FAnGR (Chicken, Pigs and Goats) and their wild relatives. Hanoi, Vietnam (08.11.2013).
- J. Decker , H. Noyes, J. W. Kim, M. E. Babar, J. M. Reecy, **M. S. Rehman**, A. Götherström, L. Praharani, T. Sonstegard, O. Hanotte, A. Molina, C. M. Seabury, M. A. Yildiz , M. P. Heaton, W. Liu , R. Schnabel and J. Taylor. 2013. World-wide Patterns of Divergence, Migration and Admixture in Domesticated Cattle. Gordon Research Seminar on Quantitative Genetics and Genomics, USA (oral Presentation).
- J. Decker , H. Noyes, J. W. Kim, M. E. Babar, J. M. Reecy, **M. S. Rehman**, A. Götherström, L. Praharani, T. Sonstegard, O. Hanotte, A. Molina, C. M. Seabury, M. A. Yildiz , M. P. Heaton, W. Liu , R. Schnabel and J. Taylor. 2013. World-wide Patterns of Divergence, Migration and Admixture in Domesticated Cattle. Plant and Animal Genome XXI. January 12-16, 2013, San Diego, CA, USA (oral Presentation).
- M. S. Khan, F. Hassan, **M. S. Rehman** and Z. Rehman. 2012. HEC and PARB Breed Development efforts at UAF – Incorporating Naked-Neckness . International Seminar on Phenotypic and Molecular Characterization of Indigenous Chicken, Goats and their wild relatives” at Univ. Agri., Faisalabad (24.09.2012).
- M. S. Khan, S. Sadeef and **M. S. Rehman**. 2012. Analysis of genetic diversity of indigenous chicken in Pakistan. International Seminar on Phenotypic and Molecular Characterization of Indigenous Chicken, Goats and their wild relatives” at Univ. Agri., Faisalabad (24.09.2012).
- **M. S. Rehman**. 2012. A presentation “Genetic structure of zebu cattle breeds in comparison to Bos taurus based on SNP” at Department of Animal Science, Iowa State University, Ames, Iowa, USA (29.06.2012).
- **M. S. Rehman**. 2012. A presentation “A simple genetic architecture underlies morphological variations in Zebu cattle of Pakistan” at Department of Animal Science, Iowa State University, Ames, Iowa, USA (22.06.2012).
- **M. S. Rehman**. 2011. A presentation “Current Status of Livestock Production in Pakistan” at Department of Animal Science, Iowa State University, Ames, Iowa, USA (14.11.2011).
- **M. S. Rehman**. 2009. DNA Extraction, Polymerase Chain Reaction (PCR) and Gel Documentation. 3rd National Workshop on “Genetic Resources and Molecular Techniques in Livestock Production”. BC-HEC JHEL program II, at University of Agriculture, Faisalabad (December 18-19, 2009).
- M. S. Khan, **M. S. Rehman** and F. Hassan. 2009. Breeding buffaloes in genomics era - issues of recording and evaluation. 6th Asian Buffalo Congress. Lahore Pakistan (Oct 27-30, 2009).
- **M. S. Rehman**. 2008. DNA Extraction, Polymerase Chain Reaction (PCR) and Gel Documentation. 2nd National Workshop on “Genetic Resources and Molecular Techniques in Livestock Production”. BC-HEC JHEL program II, at University of Agriculture, Faisalabad (October 29-30, 2008).
- M.S.Khan and **M.S. Rehman**. 2008. Domestic Animal Diversity and Animal Genetic Resources. Lecture delivered in 1st National Workshop on “Genetic Resources and Molecular Techniques in

Livestock Production”. BC-HEC JHEL program II, University of Agriculture Faisalabad (as co-author) (March 20, 2008).

- **M. S. Rehman**. 2008. DNA Extraction, Polymerase Chain Reaction (PCR) and Gel Documentation. 1st National Workshop on “Genetic Resources and Molecular Techniques in Livestock Production”. BC-HEC JHEL program II, at University of Agriculture, Faisalabad (December 21-22, 2008).
- M. S. Khan, **M. S. Rehman**. 2007. Application of Traditional Knowledge in Animal Breeding. Presentation on National Conference on “Prospects of Ethno-Veterinary (Traditional) Medicine Research and Development in Pakistan” at University of Agriculture, Faisalabad (co-Author).
- M. S. Khan, **M. S. Rehman** and I. R. Bajwa. 2005. Statistical designs and data analysis. Higher Education Commission Staff Development Course III) at University of Agriculture Faisalabad (Sept 5-15, 2005).
- M. S. Khan, **M. S. Rehman** and I. R. Bajwa. 2005. Statistical designs and data analysis. Higher Education Commission Staff Development Course II) at University of Agriculture Faisalabad (July 11- August 6, 2005).
- M. S. Khan, A.U. Hyder, **M. S. Rehman**, I. R. Bajwa and F. Hassan. 2005. Buffalo Breed Improvement Efforts in Pakistan – a Review. National Workshop on Buffalo Breeds Improvement: Options and Strategies. Organized by ASI, NARC, Islamabad (June 22, 2005).
- I. R. Bajwa and **M.S. Rehman**. 2005. International Requirements of Dairy Cattle Recording. National Workshop on Production Recording of Sahiwal Cattle in Pakistan. Organized by the Department of Animal Breeding and Genetics, University of Agriculture Faisalabad (June 16, 2005).
- M. S. Khan, **M. S. Rehman** and I. R. Bajwa. 2005. Design instrumentation and data analysis. Higher Education Commission Staff Development Course (1) at University of Agriculture Faisalabad (May, 9-June, 4 2005).
- **M. S. Rehman**, Z. Ahmad, M. S. Khan, S. Ali and Y. Zafar. 2002. First report on phylogenetic relationships among some native cattle breeds of Pakistan based on random amplified polymorphic DNA (RAPD) analysis. 33rd All Pakistan Science Conference (Dec. 26-28), University of Agriculture, Faisalabad.

Conferences/Workshops/Outreach activities

- 2024. Convener “Animal Weight and Beauty competition” organized at UAF (May 31 to June 1, 2024).
- 2024. One Day Seminar on “Capacity building of goat breeders to increase milk production and growth rate for commercial purposes” at FAH on (May 31, 2024), UAF.
- 2024. Convener “Buffalo Milk Competition” organized at UAF at the eve of Spring Festival 2024 (March 4-5, 2024)
- 2023. Convener “Buffalo Milk and Beauty competition” organized at UAF at the eve of Spring Festival 2023 (March 1-2, 2023)
- 2023. One Day Seminar on “Buffalo Production for Food security and livelihood” on the eve of World Buffalo Day (March 2, 2023) at CAS Auditorium, UAF.
- 2022. Convener “Buffalo, Cattle, Goat Milk and Beauty competition” organized at UAF (November 2-4, 2022).
- 2022. Member organizing committee of the World Egg day at FAH, UAF (October 14, 2022)
- 2022. Convener “Weight and Beauty competition” organized at UAF (June 20-24, 2022)
- 2022. Resource Person for one week refresher course for field staff organized by the UAF Community college PARS (August 1-6, 2022)
- 2022. Attended Thalassemia Awareness Seminar at UAF organized by the FAH (May 27, 2022).

2020. Attended 1st Pakistan Dairy Expo at Lahore organized by the In Box, Pakistan (September 23-24, 2020)
2020. Attended International Seminar on “Opportunities and Challenges in milk and meat Sector” organized by the FAH (September 01, 2020)
2019. Attended “National Camel Conference-2019 Health, Reproduction, Production and Products” organized by the FAH (June 25, 2019)
2018. Attended an appreciation ceremony in the honour of NRPU Winners at UAF (11.12.2018).
2018. Attended an International Brainstorming workshop on “Animal Genomics” at NARC, Islamabad (September 11, 2018).
2018. Attended “Plant for Pakistan” day being organized by the FAH, UAF (September 06, 2018).
2018. Attended a workshop on “Punjab Agriculture and Dairy Leadership Program” organized by HIS, UAF (July 18, 2018).
2017. Attended a three day training program on “An Introduction to LaTeX UAF Synopsis and Thesis” (July 26-28, 2017)
2017. Attended one day “Scientific Writing workshop” organized by the Society of Animal Sciences, FAH (April 22, 2017)
2017. Attended Food and Nutrition Conference-2017 Sustainable Approaches to Combat Malnutrition” at UAF (April 3-4, 2017)
2017. Attended “International Conference on “Foods of Animal Origin” at UAF (March 30-31, 2017)
2016. Attended a consultative meeting on “Production of Genomic Bulls” at the office of Secretary, Livestock and Dairy Development Department” Lahore with officials from L&DD, UVAS, PMAS Arid Agri. Univ. and VU (November 15, 2016).
2016. Attended one Day Symposium on One-Health at University of Agriculture, Faisalabad (August 8, 2016).
2016. Attended Colloquium on “Studies on Indigenous Chicken and Goat Production in Pakistan-Outcomes and Way Forward” at University of Agriculture, Faisalabad under GEF-UNEP-ILRI FAnGR Asia project (May 28, 2016).
2016. Attended one Day Hands-on training of Turnitin” at University of Agriculture, Faisalabad (March 19, 2016).
2015. Attended DICE 2015 Mega Innovation and Entrepreneurship Event at UAF (November 24-25, 2015)
2015. Attended one day seminar on “Academia Industry Linkages and Commercialization Policy” at University of Agriculture, Faisalabad (November 24, 2015).
2015. Attended Hands on workshop on “Layer Flock Control System” at University of Agriculture, Faisalabad (November 23, 2015).
2015. Attended a two days workshop on “Applications of Bioinformatics in Genomics” at University of Agriculture, Faisalabad (September 16-17, 2015).
2015. Attended a five days training on “Active Citizens Training of Facilitators” at University of Agriculture, Faisalabad (September 07-11, 2015).
2015. Attended a two days workshop on “Research Planning and Synopsis Writing” at University of Agriculture, Faisalabad (June 10-11, 2015).
2015. Attended a one day workshop on “Up-gradation of Modules in Molecular Genetics and Genomics” at University of Veterinary and Animal Sciences, Lahore organized by British Council INSPIRE Transnational Education Partnership Program and Department of Livestock Production, UVAS (March 19, 2015).
2014. Attended Experts Meeting; Upgradation of Modules in Molecular Genetics and Genomics for Undergraduate Degree Programmes” at University of Agriculture, Faisalabad with officials

- from UVAS under British Council INSPIRE Transnational Education Partnership Programme (January 24, 2015).
2014. Attended one day International workshop on “Buffalo Data Recording” at University of Veterinary and Animal Sciences, Lahore (April 21-23, 2014). Moderator of Technical Session 1.
 2014. Attended four day international training of trainers workshop on “Livestock Value Chains- Concepts and Analyses” at Islamabad (March 17-20, 2014).
 2014. Attended one day crash course on “Project Management in Higher Education Institutions” at University of Agriculture, Faisalabad (March 10, 2014).
 2014. Attended a master class in “Enquiry-Based Learning” at University of Agriculture, Faisalabad (March 01, 2014).
 2013. Attended three day workshop on “Project Formulation Workshop” at University of Agriculture, Faisalabad (December 3-4, 2013).
 2013. Attended one day workshop on “Consultative workshop on Devotement of commercial farm data recording sheets” at University of Agriculture, Faisalabad (October 11, 2013).
 2013. Attended one day workshop on “Self-Assessment and quality improvement in research reports” at University of Agriculture, Faisalabad (May 22, 2013).
 2013. Attended one day seminar on “Amipro, Rumen Bypass Protein and what it can do for milk producers” at University of Agriculture, Faisalabad (March 26, 2013).
 2012. Attended three day workshop on “Data analysis and developing research grant proposal” at Faculty of Animal Husbandry, University of Agriculture, Faisalabad (27-29.12.2012).
 2012. "GMOs in the pipeline: Looking to the next five years in the crop, forestry, livestock, aquaculture and agro-industry sectors in developing countries" FAO E-conference by FAO Biotechnology Forum (05.11.12 to 02.12.2012).
 2012. Attended an International Conference on “Avian Nutrition” held at Institute of Animal Nutrition and Feed Technology, University of Agriculture, Faisalabad (21.11.2012).
 2012. Attended GEF-ILRI three day workshop on “C-DAGRIS” held at Department of ABG, University of Agriculture, Faisalabad (15-17.11.2012).
 2012. Attended one day seminar on “Next Generation sequencing statistical analysis” May 11, 2012 Organized by Department of Statistics, Howe Hall, Iowa State University, Ames, Iowa, USA.
 2012. Animal Breeding and Genetics short course on “Statistical Methods for Genome-Enabled Selection” May 6-10, 2012, Department of Animal Science, Iowa State University Ames, Iowa, USA.
 2012. SAS Workshop “Introduction to Enterprise Guide” February 21-23, 2012, Department of Statistics, Iowa State University, Ames, Iowa, USA.
 2011. Strengthening partnerships in agricultural biotechnologies for the benefit of smallholders in developing countries: Discussing North-South, South-South, Public-Private cooperation and more. FAO E-conference (14.11.2011 to 11.12.2011).
 2011. Attended three day Workshop on “Statistical Analysis using SPSS and MINITAB” at Department of Mathematics and Statistics, University of Agriculture, Faisalabad (5-7 October, 2011).
 2011. Two day National Symposium on “Livestock Breeding Policy and Action Plans” organized by Department of Animal Breeding and Genetics at University of Agriculture, Faisalabad (May 13-14, 2011).
 2011. International Seminar on “Role of Livestock in Pakistan’s Economy” organized by Department of Livestock Management at University of Agriculture, Faisalabad (May 02, 2011).

2011. One day symposium on “Livestock Production – National and Global Perspective” organized by Faculty of Animal Husbandry and Faculty of Veterinary Sciences at University of Agriculture, Faisalabad (March 17, 2011).
2011. Attended Seminar on “Poultry Growth Modelling using Neural Networks” by Dr. Hafiz Anwar Ahmad, at IAN&FT, University of Agriculture, Faisalabad (14.03.2011).
2011. “Socio-Economic Survey Tools” under GEF-UNEP-ILRI FAnGR Asia Project entitled “Development and application of decision support tools to conserve and sustainably use genetic diversity in indigenous livestock and wild relatives” organized by Department of Animal Breeding and Genetics at University of Agriculture, Faisalabad (February 14-18, 2011).
2011. Attended GEF-ILRI one day seminar on “Development and Application of Decision Support Tool to conserve and sustainably use genetic diversity in indigenous livestock and their wild relatives held at Department of ABG, University of Agriculture, Faisalabad (24.01.2011).
2010. Dissemination event under HEC-BC JHEL program II “capacity building in molecular genetics Studies” Organized at University of Agriculture Faisalabad (January 19, 2010) (as member of organizing committee).
2009. 3rd workshop on “Genetic Resources and Molecular Techniques in Livestock Production”. Organized under HEC-BC JHEL program II at University of Agriculture Faisalabad (December 18-19, 2009) (as member of organizing committee and resource person)”.- 2009. 6th Asian Buffalo Congress (poster presentations), Lahore Pakistan (October 27-30, 2009)
- 2008. International Conference on Future prospects of Dairy Production in Pakistan (as member of organizing committee) University of Agriculture Faisalabad (November 3-4, 2008)
- 2008. 2nd National workshop on Genetic Resources and Molecular Techniques in Livestock Production. University of Agriculture Faisalabad (as member of organizing committee and resource person) (October 29-30, 2008).
- 2008. Visit to University of Newcastle Upon Tyne, UK under HEC-BC JHEL II project for capacity building in molecular genetics (October 13-27, 2008).
- 2008. National Workshop on Genetic Resources and Molecular Techniques in Livestock Production . BC-HEC JHELP project (as member of organizing committee and resource person) (March 20-22, 2008).
- 2007. National Workshop on Development of Indigenous Resources-The Sahiwal Cattle Breed. Organized by the Department of Animal Breeding and Genetics, University of Agriculture Faisalabad (as member of organizing committee) (April 14, 2007).
- 2007. Application of traditional knowledge in Animal Breeding. National Conference on “Prospects of Ethno-Veterinary (Traditional) Medicine Research and Development in Pakistan” at University of Agriculture, Faisalabad (February 16-17, 2007).
- 2006. One day workshop on “Role and Functions of Quality Enhancement Cell” at University of Agriculture, Faisalabad (May 31, 2006).
- 2006. International Symposium on “Agriculture in the 21st century-challenges and strategies”. Organized by the University of Agriculture, Faisalabad (March 14-15, 2006).
- 2005. Statistical designs and data analysis. Higher Education Commission Staff Development Course III) at University of Agriculture Faisalabad (Sept 5-15, 2005).
- 2005. Statistical designs and data analysis. Higher Education Commission Staff Development Course II) at University of Agriculture Faisalabad (July 11- August 6, 2005).
- 2005. National Workshop on Production Recording of Sahiwal Cattle in Pakistan. Organized by the Department of Animal Breeding and Genetics, University of Agriculture Faisalabad (June 16, 2005).
- 2005. Design instrumentation and data analysis. Higher Education Commission Staff Development Course (1) at University of Agriculture Faisalabad (May, 9-June, 4 2005).

- 2004. National Conference on “Sustainable Livestock Production” organized by Animal Husbandry Association, Pakistan in Islamabad (September 4, 2004).
- 2004. National workshop on “The Methods of Impact Assessment in Field Studies” organized by Dept. of Livestock Management, University of Agriculture, Faisalabad, School of AFRD University of Newcastle Upon Tyne, UK, British Council, Pakistan and DFID (UK). (March 20, 2004).
- 2002. National workshop on Farm Animal Genetic Resources. Dept. of Animal Breeding and Genetics, University of Agriculture, Faisalabad (Pakistan) (Jan. 15 to 16, 2003).
- 2002. 33rd All Pakistan Science Conference. University of Agriculture, Faisalabad (Pakistan) (Dec. 25 to 28, 2002).