

FAIZ-UL HASSAN



Email: f.hassan@cuvas.edu.pk

Phone # Off. 62-9255716

Cell. 0092-333-8317328

Postal Address:

Department of Breeding and Genetics, Faculty of Animal Production and Technology, Cholistan University of Veterinary and Animal Sciences, Bahawalpur, PAKISTAN.

Qualification:

B.Sc. (Hons) Animal Husbandry (UAF)
M. Sc. (Hons) Animal Breeding & Genetics (UAF)
Ph. D Animal Breeding and Genetics (UAF)
Postdoctrante Nutrigenomics (CAAS, China)

Awards/Honors/Distinctions

1. Earned First position Gold Medal in B.Sc.(Hons) Animal Husbandry for year 2001 by securing highest CGPA
2. Recipient of University merit scholarship for four years of B.Sc. (Hons.) Animal Husbandry (1997-2001)
3. Recipient of Short Term Training Fellowship (5 Months) of EFS-USDA in 2009 at Newcastle University, UK
4. Recipient of Nottingham International Visiting Fellowship, 2014 (3 Months) at Nottingham University, UK
5. Recipient of Short Term Visiting Fellowship (6 Weeks) of GEF-ILRI AnGR project at CAAS-ILRI JLLFGR, China
6. Recipient of two year postdoc fellowship (2018-2020) under TYSP program of MOST at CAAS, BRI, China

Work Experience

Position	Institution	Responsibilities	Tenure
Professor	Cholistan University of Veterinary and Animal Sciences, Bahawalpur	Main responsibilities are teaching, research, administration, and public service.	Dec. 23, 2022 to date
Lecturer	University of Agriculture, Faisalabad (Pakistan)	Main responsibilities are teaching, research, administration, and public service.	March, 2007 to Dec. 22, 2022
Teacher (Per Lecture Basis)	University of Agriculture, Faisalabad (Pakistan)	Teaching of undergraduate and postgraduate courses	July, 2004 to Feb. 2007
Brooke Equine Facilitator	Brooke Hospital for Animals, Pakistan	Training and education of equine owners. Development of extension material on different aspects of equine health and welfare	May, 2002 to March, 2003

Research

Research area: General: Animal Production
Specific: Animal Genomics

Research Profile

Total Impact Factor Publications:	90
Total Citations (Google Scholar):	5335
H-index	38
i10-index	79
Total Impact Factor	300

Postgraduate Student's research Supervision

As Supervisor:	Ph.D= 01	M. Phil= 18
As member:	Ph.D= 02	M. Phil= 25

Research Projects

- 2022-2026. Development of Rohi Chicken Breed for Cholistan. Sponsored by Punjab Agricultural Research Board, Pakistan for Rs 34.3 million as **Project Manager**. (ongoing)
- 2025-2027. Development of Customised SNP Chip for Genomic Selection and Targeted Genetic Improvement of Cholistani Cattle. Sponsored by Higher Education Commission NRPU program for Rs 7.63 Million as **Principal Investigator** (completed)
- 2019-2020. Role of amino acid metabolism in modulation of ruminal microbiome diversity, metagenomic functional profile and subsequent changes in rumen fermentation and methanogenesis. Sponsored by Ministry of Science and Technology, China, as **Research Fellow** (Completed)
- 2018-2019. Modulation of Rumen Microbiome using Phytogetic Feed Additives for Improvement of Productive Performance of Buffaloes. Sponsored by Ministry of Agriculture and Guangxi Buffalo Research Institute, Chinese Academy of Agricultural Sciences, Nanning, China, as **Research Fellow** (Completed)
- 2018-2020. Genomic assisted prediction of genetic values for economic traits in Sahiwal cattle of Pakistan. Sponsored by Higher Education Commission for Rs 6.93 Million as **Co-Principal Investigator** (completed)
- 2017-2019. Production and Dissemination of Heat Tolerant Rural Chicken for Egg and Meat Production. Sponsored by USPCAS-AFS for \$75,000/- as **Co-Principal Investigator** (completed)
- Jan-Feb, 2016 “Genomic Characterization of Indigenous Pakistani Goats Using High Density SNP Markers” Sponsored by GEF-UNEP-ILRI FAnGR Asia Project as **Visiting Scientist**. (Completed)
- 2014-2016 Improvement of Beetal Goats and Indigenous Chicken through Availability of Superior Sires. Sponsored by EFS-USDA, UAF for Rs. 5.587 million as **Co-Principal Investigator** (completed)
- 2011-2016. Development of egg-type chicken lines for backyard poultry production. Sponsored by PARB for Rs 20.3 million as **Research Team Scientist**. (Completed)
- April-July, 2014 Characterization of signature of positive selection in Ethiopian village chicken. Sponsored by University of Nottingham as **Visiting Scientist** (completed)
- 2012-2014. Improved Utilization of Beetal Goats through Open Nucleus Breeding Scheme. Sponsored by Agricultural Linkage Program, PARC for Rs 1.97 million as **Research Team Member**. (completed)
- 2009-2012. Development of a new breed of chicken for backyard poultry rearing (Phase-I). Sponsored by HEC, Islamabad for Rs 7.8 million as **Co-Principal Investigator** (Completed).

- 2004-2012. Crossbreeding of Sahiwal with Holstein and Jersey cattle in Pakistan-Performance Traits and Genetic Parameters (*Ph.D Thesis*)
- 2001-2004. Phylogenetic relationship among different horse breeds of Pakistan using DNA fingerprinting technology (*M. Sc. (Hons.) Thesis*)

Publications

Books/Book Chapters/ Reports

1. **Hassan, F.**, M. Mehboob, R. M. Bilal, F. Siddique, and M. Alagawany. 2025. Chapter 13 - Yeast and its derivatives in animal and fish nutrition. Editor(s): Mahmoud Alagawany, Sobhy M. Sallam, Mohamed E. Abd El-Hack. Organic Feed Additives for Livestock, Academic Press, Elsevier. Pages 195-210. <https://doi.org/10.1016/B978-0-443-13510-1.00013-X>.
2. **Hassan, F.**, M. Mehboob, R. M. Bilal, M. U. Akhtar. 2025. Chapter 14 - Chelates and organic minerals, Editor(s): Mahmoud Alagawany, Sobhy M. Sallam, Mohamed E. Abd El-Hack. Organic Feed Additives for Livestock. Academic Press, Elsevier, Pages 211-234. <https://doi.org/10.1016/B978-0-443-13510-1.00014-1>.
3. Alagawany, M., M. R. Farag, N. A. El-Shall, **F. Hassan**, M. E. Abd El-Hack. 2025. Chapter 5. Emulsifiers and their applications in farm animals. Editor(s): Mahmoud Alagawany, Sobhy M. Sallam, Mohamed E. Abd El-Hack. Organic Feed Additives for Livestock. Academic Press, Pages 69-83. <https://doi.org/10.1016/B978-0-443-13510-1.00005-0>.
4. Bilal, R.M., **F. Hassan**, M. Rafeeq, M. R. Farag, M. E. Abd El-Hack, M. Madkour and M. Alagawany. 2022. Use of Cinnamon and its Derivatives in Poultry Nutrition. Pp: 52-65 (14): DOI: 10.2174/9789815049015122010007. Editors: M. E. Abd El-Hack & M. Alagawany. Antibiotic Alternatives in Poultry and Fish Feed (2022) 1: 52. <https://doi.org/10.2174/9789815049015122010007>
5. Javed M., Nadeem A., and **F. Hassan**. 2021. Introduction to Molecular Genomics. Bentham Science Publishers, UAE ISBN: 978-1-68108-926-3 (Print): ISBN: 978-1-68108-925-6 (Online) DOI: <https://doi.org/10.2174/97816810892561210101>.
6. **Hassan, F.**, Jha, R., Alagawany, M. M., eds. (2022). Interplay of Nutrition and Genomics: Potential for Improving Performance and Health of Poultry. E-Book. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-83250-523-6.
7. M. S. Khan, S. A. Bhatti, S. H. Raza, M. S. Rehman and **F. Hassan**. 2018. Chapter 20: **Livestock production - Status and Policy Options**. Book chapter in The Punjab Agricultural Policy (by Iqar Ahmad Khan) CRC Press, eBook ISBN9781351208239. <https://doi.org/10.1201/9781351208239>
8. M. S. Khan, M.S. Rehman and **F. Hassan**. 2014. "Poultry Guide". A farmer training booklet under PARB funded project (A Urdu Booklet).
9. **F. Hassan**. 2009. Short term training report on "QTL Detection for Economic Traits in Cattle" at Newcastle University, UK (March to July 2009), submitted to Endowment Fund Secretariat (FDTTPC), University of Agriculture, Faisalabad.
10. M. S. Khan and **F. Hassan**. Chapter 15. Crossbreeding, In: "Health and Husbandry of Dairy Animals" (2008) Eds. B. B. Khan, Pak TM Printer Faisalabad: ISBN: 978.969.8237.37.0

Research Papers

1. Al-Khalaifah, H., **Hassan, F.**, Ullah, M. M., & Chen, Y. (2026). Role of PI3K gene family as a molecular hub for regulation of growth and immunity: Potential implications for sustainable poultry production. *Poultry Science*, 106667.
2. Bilal, R. M., Rudayni, H. A., Siddique, U., **Hassan, F.**, Siddique, F., Saeed, S., ... Alagawany, M. (2026). Using herbal plants in broiler diets with special reference to coriander, garlic, cumin, fennel, and yarrow: toward sustainable broiler production. *World's Poultry Science Journal*, 82(1), 277–298. <https://doi.org/10.1080/00439339.2025.2611354>
3. Shao, Z., Z. Lu, L. Wu, W. Liu, M. Abdullah, **F. Hassan**, X. Chen, R. Cao, B. He. 2026. Methyl Coenzyme M Reductase as a Target for Inhibition of Methanogenesis in Ruminants: Challenges and Opportunities. *Frontiers in Microbiology* 16, 1704809.
4. Bibi, N., S. Ahmed, **F. Hassan**, Z. Mushtaq, Z. Qadeer, M. Shafiq, M. R. Tariq, R. Mugabi, E. Macit, G. A. Nayik. 2025. Isolation and characterization of *Enterococcus faecium* from camel milk and its potential use for value addition of functional yogurt. *International Journal of Food Science and Technology*,; vvaf253. <https://doi.org/10.1093/ijfood/vvaf253>.
5. **Hassan, F.**, Ashraf, N., Arain, M.A. et al. Heat stress in riverine buffaloes: regulatory mechanism, physiological changes, production and reproductive performance, and mitigation strategies. *Int J Biometeorol* (2025). <https://doi.org/10.1007/s00484-025-02997-2>.
6. Imran, S., M.S. Khan, A.U. Hyder, S.A. Bhatti, F. Ramzan, M.S.U. Rehman and **F. Hassan**. 2025. Comparing Fertility Outcomes of Washed and Unwashed Cryopreserved Semen in Beetal Goat Through Artificial Insemination. *Pakistan J Agri. Sci.* 62: 59-68. <https://doi.org/10.21162/PAKJAS/25.402>
7. Li, Z., Ali, S., Arain, M.A. **Hassan, F.** 2025. Postbiotics and Parabiotics: A Viable Health Promoting Alternative for Poultry Industry—A Comprehensive Review. *Probiotics & Antimicro. Prot.* <https://doi.org/10.1007/s12602-025-10708-x>.
8. Jin, Y.; Sehgal, S.A.; **Hassan, F.**; Liu, G. *In Silico* Identification of Novel Compounds as Anthelmintics Against *Haemonchus contortus* Through Inhibiting β -Tubulin Isotype 1 and Glutathione S-Transferase. *Animals* **2025**, *15*, 1846. <https://doi.org/10.3390/ani15131846>.
9. Saeed, M., **F. Hassan**, H. Al-Khalaifah, R. Islam, A. A. Kamboh, G. Liu. 2025. Fermented banana feed and nanoparticles: a new eco-friendly, cost-effective potential green approach for poultry industry. *Poultry Science*, 104 (7): 105171. <https://doi.org/10.1016/j.psj.2025.105171>.
10. Arsalan A, Rehman AU, Younus H, Ravikumar Y, **Hassan F**, Arain MA, Buzdar JA, Qi X. Nutrigenomic Potential of Mineral Nano-Particles to Modulate Poultry Health and Performance. *J Anim Physiol Anim Nutr (Berl)*. 2025 Jul;109(4):1048-1061. <https://doi.org/10.1111/jpn.14119>.
11. Li M, **Hassan F.**, Lin Q, Arshad MA, Akhtar MU, Peng L, Yang C, Liang X, Huang J. 2025. In Vitro Evaluation of Ruminant Digestibility, Fermentation Characteristics, and Bacterial Diversity of Kenaf Crop at Various Cutting Heights. *Vet Sci*. 12;12(1):50. <https://doi.org/10.3390/vetsci12010050>.
12. Shi, Zh., Lan, Yl., Qiao, Zh., Yan, X.Z., Wang, YZ, Zhang, B., Ma, X., **Hassan, F.**, Wang, WJ., & Deng, T. Changes in fecal microbiota of dairy cows with and without endometritis. *BMC Vet Res* **21**, 201 (2025). <https://doi.org/10.1186/s12917-025-04580-8>.
13. Li, M.; **Hassan, F.**; Akhtar, M.U.; Peng, L.; Xie, F.; Deng, Q.; Zhong, H.; Wei, K.; Yang, C. 2024. Fibrolytic Enzymes and Lactic Acid Bacteria Improve the Ensiling Characteristics of Ramie and Elephant Grass Mixed Silage. *Agriculture*, *14*, 1746. <https://doi.org/10.3390/agriculture14101746>.
14. Morammazi, Salim, Shokrollahi, B. and **Hassan, F.** 2024. Genomic characterization, phylogenetic and expression analysis of foraging gene in *Apis mellifera*. *Gene*, 910:148318.
15. Aboamer, A.A., Ebeid, H.M., Siddique, F., M.A. Arain and **F. Hassan**. Nutraceutical potential of essential oils in dairy animal diets: challenges and opportunities. *Proc. Indian Natl. Sci. Acad.* (2024). <https://doi.org/10.1007/s43538-024-00310-0>.
16. Safdar, M., **F. Hassan**, Muhammad Sajjad Khan, Aneeb Hassan Khan, Yasmeen Junejo, Mehmet Ozaslan, Muhammad Asif Arain, Atique Ahmed Behan. 2024. In silico analysis of polyphenols modulate

- bovine PPAR γ to increase milk fat synthesis in dairy cattle via the MAPK signalling pathways, *Journal of Animal Science*, skae248, <https://doi.org/10.1093/jas/skae248>.
17. Shi Z, Lan Y, Wang Y, Yan X, Ma X, **Hassan F**, Rushdi HE, Xu Z, Wang W, Deng T. 2024. Multi-omics strategy reveals potential role of antimicrobial resistance and virulence factor genes responsible for Simmental diarrheic calves caused by *Escherichia coli*. *mSystems* 9:e01348-23. <https://doi.org/10.1128/msystems.01348-23>
 18. **Hassan F.**, Liu C, Mehboob M, Bilal RM, Arain MA, Siddique F, Chen F, Li Y, Zhang J, Shi P, Lv B and Lin Q (2023) Potential of dietary hemp and cannabinoids to modulate immune response to enhance health and performance in animals: opportunities and challenges. *Front. Immunol.* 14:1285052. doi: 10.3389/fimmu.2023.1285052.
 19. **Hassan, F.**, M. S. Rehman, M. Javed, K. Ahmad, I. Fatima, M. Safdar, N. Ashraf & 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 and Dynamics*, DOI: 10.1080/07391102.2023.2268185
 20. Safdar, M., S. U. Rehman, F. Shafqat, M. Shan, S. S. Khan, **F. Hassan**, Hafiz Khawar Ali, Mehmet Ozaslan, The global spread of human monkeypox virus: Challenges and opportunities for prevention, *Vacunas*, 24, (4): 2023.
 21. Azhar, J., A. Nadeem, M. Javed, H. I. Ahmad, **F. Hassan** & F. S. Shah (2023). Evaluation of phytochemicals from *Thymus serpyllum* as potential drug candidates to manage oxidative stress in transition dairy cows, *Journal of Biomolecular Structure and Dynamics*, DOI: 10.1080/07391102.2023.2209190.
 22. Abdullah M, Rehman MS-u, Rehman MSN, AlKahtane AA, Al-Hazani TM, **Hassan F.**, Rehman Su. Genome-Wide Identification, Evolutionary and Mutational Analysis of the Buffalo Sox Gene Family. *Animals*. 2023; 13(14):2246. <https://doi.org/10.3390/ani13142246>.
 23. 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*, vol. 2022, Article ID 1581714, 11 pages. <https://doi.org/10.1155/2022/1581714>.