

Special Issue

Livestock Genetic Evaluation and Selection

Message from the Guest Editors

Livestock genetic evaluation and genomic selection have revolutionized animal agriculture by enhancing productivity, health, and environmental resilience. Low-cost genomic technologies and advances in selection methods have enabled precise identification of animals with traits like higher milk yield, disease resistance, and feed efficiency. Genomics also facilitates evaluation for novel traits such as hoof health, methane emission, and heat tolerance, even with limited phenotypes. Integrating multi-omics data and using advanced statistical methods like machine learning can improve prediction accuracy. There is growing demand for genomic evaluation of novel phenotypes such as methane emissions, environmental adaptation, and resilience. This Special Issue focuses on advances in genomic evaluation and selection for novel phenotypes, new statistical methods, multi-omics integration, and improvements in crossbred cattle evaluation in underdeveloped countries. Reviews and research are invited on genomic selection methods, genetic evaluation in challenging environments, advanced statistical approaches, and traits linked to sustainability, welfare, and reproductive efficiency.

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About the Journal

Message from the Editor-in-Chief

Animals is an on-line open access journal that was first published in 2011. *Animals* adheres to rigorous peerreview and editorial processes and publishes only high quality manuscripts that address important issues in the many varied disciplines that involve animals, with a focus on animal science, animal welfare and animal ethics. *Animals* is covered in the Science Citation Index Expanded (SCIE) in Web of Science, with the latest Impact Factor: 2.7 (2024, ranks 15/86 (Q1) in 'Agriculture, Dairy & Animal Science'; 21/170 (Q1) in 'Veterinary Sciences'), 5-Year Impact Factor: 3.2.

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