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Effect of Genetic and Nongenetic Factors on Functional and Milk Production Traits in Livestock

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Message from the Guest Editors

Understanding the nature of the genetic associations between production, health and fertility traits considering nongenetic factors (e.g., production systems, regions and weather conditions) is essential to optimize the genetic selection in livestock. Several phenotypes derived from milk (e.g., SCC, casein, lactose, β -hydroxybutyrate, and saturated and UFA) are very useful as indicator traits to improve functional traits. On the other hand, recent advancements in genomic tools offer new opportunities for animal breeders to incorporate functional traits along with milk production traits. In the context of genomic studies, areas fruitful for genetic improvement of dairy productivity also include genome-wide association studies (GWASs) and post-GWAS analyses with a growing emphasis on the role of gene $\times$ environment interaction. Such studies identify genomic regions and candidate genes for functional and milk production traits. This Special Issue aims to present original research or reviews related to genetic and environmental factors affecting livestock performance, with particular focus on health and milk production traits.



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Special Issue



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Message from the Editor-in-Chief

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