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The performance and susceptibility of different commercial broilers to dyschondroplasia

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A 49-day study was conducted to evaluate the performance parameters and susceptibility of different commercial broilers hybrid (B, A, C) to tibial dyschondroplasia (TD). Total of 1440 1-d-old chicks were attributed to 6 experimental groups and each sex of hybrids was represented by four pens of 60 broilers each. Incidence of tibial dyschondroplasia disorder by bone mineral density (BMD) method results, showed significant effect among hybrid at 28 and 49 days of age ($P \leq 0.05$), but the sex and reciprocal sex and strain effect were not effective on appearance of this disorder and its related physiological parameters. Whereupon the prevalence of TD in hybrid A was higher than hybrid B and C. Results showed that hybrid and sex had no significantly effect on total food consumption ($P > 0.05$). A significant difference was observed in daily weight and food conversion coefficient among hybrids and gender ($P < 0.01$), as, hybrid C showed the highest body weight gain, compared to other hybrids, over the test period.

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Molecular analysis of South African ovine herpesvirus 2 strains based on selected glycoprotein and tegument genes

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Ovine herpesvirus 2 (OvHV-2), is the causative agent of sheep-associated malignant catarrhal fever (SA-MCF), a generally fatal disease of cattle and other captive wild ruminants. Information on the OvHV-2 strains circulating in South Africa (SA) and other African countries with regard to genetic structure and diversity and pattern of distribution is not available. This study aimed to characterize the OvHV-2 strains circulating in SA using selected genes encoding glycoproteins and tegument proteins. To establish the genetic diversity of OvHV-2 strains, four genes, *Ov 7*, *Ov 8 ex2*, *ORF 27* and *ORF 73* were selected for analysis by PCR and DNA sequencing. Nucleotide and amino acid multiple sequence analyses revealed two genotypes for *ORF 27* and *ORF 73* and three genotypes for *Ov 7* and *Ov 8 ex2*, randomly distributed throughout the regions. *Ov 7* and *ORF 27* nucleotide sequence analysis revealed variations that distinguished SA genotypes from those of reference OvHV-2 strains. Epitope mapping analysis showed that mutations identified from the investigated genes are not likely to affect the functions of the gene products, particularly those responsible for antibody binding activities associated with B-cell epitopes. Knowledge of the extent of genetic diversity existing among OvHV-2 strains has provided an understanding on the distribution patterns of OvHV-2 strains or genotypes across the regions of South Africa. This can facilitate the management of SA-MCF in SA, in terms of introduction of control measures or safe practices to monitor and control OvHV-2 infection. The products encoded by the *Ov 7*, *Ov 8 ex2* and *ORF 27* genes are recommended for evaluation of their coded proteins as possible antigens in the development of an OvHV-2 specific serodiagnostic assay.

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