

The Haemoglobin, Transferrin, Ceruloplasmin and Glutathione Polymorphism of Native Goat Breeds of Turkey, I-Angora and Hair

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Abstract : This study has been carried out in order to determine the polymorphic traits of various biochemical parameters in goat breeds which are native to Turkey. For this purpose, Angora and Hair goats breeds were chosen as live materials. Two different herds for each breed were selected from Ankara and Antalya, respectively. Blood samples were taken from a total of 120 goats aged between 2 and 4 which was made up of 60 Angora goats and 60 Hair goats. All which derived equally from 4 lots of herds. Analyses were performed for the polymorphic determination of the Haemoglobin (Hb), Transferrin (Tf), Ceruloplasmin (Cp) and Glutathione (GSH). Hb types were determined by starch gel electrophoresis and Tf types were detected by SDS-PAGE electrophoresis. Furthermore, Cp and GSH analyses were performed by spectrophotometrically. Following the analysis, Hb types were found as 3 genotypes (AA, AB, BB) controlled by 2 allele genes. Tf types were found as 6 genotypes (AA, AB, AC, BB, BC, CC) controlled by 3 allele genes. Findings for Hb was in line with the Hardy-Weinberg Equilibrium (HWE) in Angora goats while the Hair goat was not found to be in line. Moreover, Tf was found in line with the HWE for 2 separate goat breeds. The levels of Cp and GSH of two breeds were significantly different from other ($P < 0.0001$). The findings are recorded as a source of reference for prospective polymorphism studies.

Keywords : electrophoresis, genetic resources, goats, spectrophotometer

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