

GENETIC POLYMORPHISM OF TRANSFERRIN IN ARABI SHEEP BREED .

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ABSTRACT

This study was carried out at the Animal Farm, Hartha Research Station, College of Agriculture, Basrah University and several farms in Basrah Province. Polymorphism of transferrin biochemical system was examined in the blood of Arabi sheep breed using vertical polyacrylamide gel electrophoresis (PAGE) in discontinuous buffer system and staining (Amido Black). This is the first study on transferrin on sheep breeds in Iraq. Totally 119 blood samples were analyzed. Transferrin loci were found to be polymorphic among all analyzed samples. Eight transferrin variants have been found in Arabi sheep breed sera which are designated AA, BB, DD, MM, AB, AM, BM and DM in order of decreasing mobility caused by four alleles of that locus (A, B, D and M). Sheep populations were studied which differed in gene frequencies. The superiority of allele B and M (0.36 and 0.31), respectively on the allele A (0.26) while the D allele was rare allele (0.07). Differences between expected and observed number of transferrin genotypes were significant. The aim of this study was to use the PAGE as a fast, efficient and low cost method to detect the genetic variants of transferrin gene in Arabi sheep breed. The polymorphism of sheep transferrins can be used for the identification of offspring.